Canadian Computer
# Wholesaler
THE MONTHLY FOR RESELLERS
JULY 1997 Vol.3 No.7

## LAB TEST:
# Mid-Range Pentium Systems
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**VARs: Opportunity in Intranets**
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JULY 97 VOL.3 NO.7

# Contents


**COMDEX**
Comdex — From Atlanta to Toronto! ... 16
*By Jeff Evans*

**NEWS**
Digital TV: The PC's Next Frontier? ... 18
*By Jeff Evans*

**EYE ON THE INDUSTRY**
Silicon Du Nord Spawns Noteworthy Software ... 21
*By David Tanaka*

**MICROPROCESSORS**
The King Is Dead, Long Live The King! ... 22
*By Jeff Evans*

**LAB TEST**
Mid-Range Pentium Systems
New Capabilities Mean More
Appeal For Your Demanding Customers! ... 24
*By Jacc Bhoot, Tim Bingham-Wallis and Steve Halinda*

**LAB FEATURE**
Is Thinner Always Better? ... 40
*By Steve Halinda*

**WIRELESS COMPUTING**
Look Ma, No Wires! ... 42
*By Paul Weinberg*

Will Digital PCS Mean More Business For You? ... 43
*By Paul Lima*

**INTRANETS**
Intranet Knowledge Void Waiting To Be Filled By VARs ... 48
*By Dan McLean*

**BUSINESS BASICS**
Motivating Your Employees For
Increased Satisfaction And Profit ... 51
*By Douglas Gray*

**THE INDUSTRY**
Capitalizing On Co-op ... 52
*By David Rosen*

**MARKETING**
VARs: Bolster Your High-Tech Image ... 53
*By David Eisenstadt*

**INDUSTRY PERSPECTIVES**
Are You Fully Servicing Your SOHO Customers? ... 54
*By Daren Khatib*

**WORKING THE WEB**
Building A Web Site For Business ... 56
*By Sean Carruthers*

**TECHNOLOGY**
Why Are We Still Waiting?! ... 57
*By Alan Zisman*

**PUNDIT**
Evolutionary Theory: The Return Of The Threes And Fives ... 58
*By Graeme Bennett*

**THE LAST WORD**
Computex Spotlights Taiwan's Industry Influence ... 62
*By Douglas Alder*


Take our Reader Poll! Page 20

## DEPARTMENTS


The Editor's Desk 6
Letters To The Editor 8
Industry Flash 9
Canada Watch 12
Nifty Numbers 20
Asiascape 46
New Products 60
Calendar 61
People 61

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# The Wisdom Of Golf?

"Don't worry about trying to hit the ball — it's just something that gets carried along in the process of your swing."

That's what my golf instructor has just told me, after my second lesson at that peculiar sport. When I totally miss the tiny white sphere, it's "Oh no, that's okay — it's your posture and your swing that are most important." And when the evil little orb gives a pitiful little bounce and comes to rest a few feet in front of me, he cheerfully points out "But look, it's straight in the direction of your target!"

On the ISO 9000 of golf — get the proper procedures and infrastructure in place, and you'll pave the way for the ball to sail over the green and drop neatly in the hole. (Okay, I'm gullible!) But still, consider Microsoft Corp. A common, albeit caustic view of that software giant holds that the company doesn't reign over the industry on the merits of superior technology, rather, Microsoft triumphs by its powerful marketing machine. But I would suggest Microsoft's ability to offer solutions, true end-to-end offerings to customers is paramount to that company's success story. While people may chuckle about such spawn as "Bob," very few would argue that kudos must go to the inventor of the "Office" concept. This saw Microsoft's various strengths bundled into one integrated (at least they're finally getting there) solution and contributed greatly towards the dislodging of WordPerfect from an established position as word processing market leader. It's that old "parts are greater than the whole" adage — alive and kicking.

Consider the vendors with whom you like to deal. Their product offerings may be your paramount concern, but don't such factors as their services, support and ease of doing business also rank high on your checklist? (Speaking of services, see *"Capitalizing On Co-op,"* page 50, by David Rosen, for an examination of vendors' different co-op advertising and marketing efforts.)

Of course, we wish that products were all 100 per cent innovative and technically flawless. However, if your partner treats you well and fairly, goes out of the way to meet your needs and those of your customers, you'll have some patience for a rare problem with a product or service. That's particularly true if your vendor or distributor partner takes responsibility, quickly fixes the problem and goes above and beyond the expected in the process.

Intel Corp. found itself in the midst of a media fiasco when it tried to pooh-pooh expressed concerns about the accuracy of the original Pentium chip. Indeed, Intel got off a lot lighter by better handling the discovery of the most recent Pentium Pro/Pentium II bug through publicly owning up to the "errata" and quickly working on ways to fix the problem. (For the latest on Intel and the microprocessor market, check out Jeff Evan's *"The King is dead, long live the King!"* on page 22.)

Your own customers may not expect absolute perfection, but they do want honest, eager service and need to feel that you truly value their business. And while a complaint can be a blow to even the sturdiest of egos — in this industry, a complaint can be very valuable! Indeed, studies show that if a customer complaint is resolved to satisfaction, that customer will have greater loyalty to the store than if there had never been a problem in the first place!

How wonderful! If you build an infrastructure that is supportive of your customers and you are eager to provide the solutions they need; then when mistakes do happen, you can actually capitalize off of them!

And your staff ought to be your most valuable resource. They are the interface to your customers, and if you've got technically apt, pleasant user-friendly interfaces — you'd better keep and develop them! Douglas Gray addresses the tricky issue of optimizing your staff in *"Motivating Your Employees For Increased Satisfaction And Profit,"* page 53.

Of course, your product line is crucial. Check our *Lab Test* on mid-range Pentium systems (page 24) and our special report on flat-screen displays (page 40). We also examine the growing markets of intranets (page 46) and wireless technologies (page 42). After all, if the golf ball really didn't matter, why does my instructor keep reminding me to keep my eyes on it?

Enjoy your summer, and drop us a line with your comments or concerns on the industry and this magazine. We're also accepting golf tips. CCW

*Grace Casselman*
*Editor*


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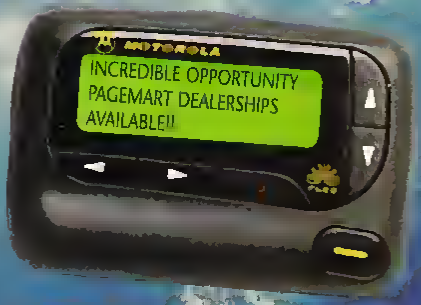


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## Cannot attend Comdex

I was appalled when I first received my free guest pass to Comdex and read the age limit. I'm currently 17 years old and have been running a successful computer reselling business for over two years. I must keep current with all the developing trends and technologies in the computer industry and must maintain a reputable network of suppliers.

Now that I cannot attend Comdex, I will have to face the reality that I will lose some of my ability to compete in this already cut-throat market due to the promotions missed and lack of contacts made. Since I am the owner, I make all the purchasing decisions for the company. This is $50,000 to $60,000 which the exhibitors are losing out on because I'm not "qualified to make a buying decision." It's their loss as well as mine as I will not be able to benefit from their expertise and products.

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We welcome your letters on industry issues and concerns, as well as your comments on our magazine.
We reserve the right to edit your contributions for length and clarity.
Please write to The Editor via E-mail at ccw@top.ca or fax (604) 608-7686.

## Comdex age restriction is shocking

As a young entrepreneur, only 20 years of age, I am shocked and appalled at the decision of Comdex to restrict entrance to the event based on age.

Since the age of 17, I have run my own computer, Internet providing and training business from a retail store location in Orangeville, Ont. I have attended seminars, conferences and trade shows all over the world, and yet, I have never once been told that I am too young to participate. Last fall, for example, I flew to Las Vegas to attend the largest Comdex event in the world. While there, I had the opportunity to collect information and meet many influential business contacts. Had age restrictions prevented me from attending the event, I most certainly would have missed out on an exciting world of possibilities.

In all, I know as a young entrepreneur and business man, that youth represent an integral part of the computer industry.

*Tyler Patton*
*President*
*Unique Computer & Communication Solutions Inc.*
*Orangeville, Ont.*
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## Comdex must maintain business atmosphere

We asked our exhibitors last year what they felt would help qualify the audience and their response was "no kids." We understand that there are those people who feel they are decision makers for companies and they are under the age of 21. These folks will maintain a business appearance and act appropriately to maintain the quality of the audience. At some events, kids come to get the "free stuff" and are not the type of attendee our exhibitors are looking for.

I believe that this policy will not only help qualify our attendees to our exhibitors but also maintain a business atmosphere that the Comdex "brand" is known for.

*Bob Berkowitz*
*Spokesperson*
*SoftBank Comdex*

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## Visa, Mastercard publish EFT protocol standard

(NB) — Mastercard International and Visa International announced the publication of SET 1.0, an open industry protocol that details how payment card transactions on the Internet and other open networks will be secured using encryption technology and digital identification.

Both MasterCard and Visa have a big stake in the future of electronic fund transfers. MasterCard International has 400 million credit and debit cards accepted at more than 14 million merchant, cash and ATM locations worldwide; Visa's 561 million cards are accepted at more than 13 million locations worldwide, while its Global ATM Network consists of more than 316,000 ATMs in 109 countries.

The newly published SET 1.0 specification, which is available at http://www.mastercard.com and http://www.visa.com on the World Wide Web, includes business requirements, technical specifications and a programmer's guide.

Stephen M. Herz, Visa's senior vice-president of Internet commerce, said: "SET will enable our members to extend their relationships with consumers and merchants into the virtual world with the same trust and confidence that those groups have today in the physical world."

## Cross Pen enters electronic writing market-place

The A.T. Cross Company, long known for its high quality, traditional writing tools, entered the digital age on June 2 at the Spring Comdex in Atlanta, with the introduction of a range of electronic writing products. Cross rolled out its new iPen, a line of "natural" computer writing tools aimed at increasing productivity in "fax, word processing, graphics, and other 'electronic paper' applications, according to the company.

The iPen consists of a pen and tablet which can be installed for use on any Windows PC with a nine-pin COM port. It can perform all the functions of a mouse, in addition to handwriting, tracing or sketching input. The pen and tablet surface offer a unique, patented "pen on paper" feel to users, a feature that makes learning to use the iPen quicker and more enjoyable. The iPen has a suggested list price of about $199, and will ship in quantity in October. The iPen will be available with a bundled version of Symantec WinFax PRO for about $275, and with the Cross Handwriting recognition Software Suite for about $325.

For more information, contact http://www.cross-peg.com or (401) 333-1200.

## Contact: The Editor

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*Canadian Computer Wholesaler* welcomes your opinions on current issues in the market, plus your feedback on our publication.

**NEWS**

We welcome your ideas regarding news and feature topics for *Canadian Computer Wholesaler*. Feel free to contact the editors directly with your suggestions.

**TEST LABS**

We'd like to hear your feedback and suggestions on our Test Labs reviews section.

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## Compaq rolls out hefty workstation offerings

Looking to take on those markets traditionally dominated by Unix workstations, Compaq Computer Corp. has launched its Compaq Professional Workstation 6000 and Professional Workstation 8000, running Windows NT on Pentium II and Pentium Pro processors.

Compaq's Professional Workstation

Indeed, the Workstation 8000 supports up to four 200MHz Pentium Pro processors with 512KB cache, and up to 3GB of memory.

"The workstation sell is really a solution sell," said Karen Finley, product manager, workstations, for Compaq Canada Inc. She said the workstations differ from Compaq's highest-end PCs, in that "the architecture is different. They're built from the ground up with NT in mind, to optimize their performance for NT."

Albert Daoust, analyst for market research firm Evans Research Corp., pointed out that Compaq has already established mindshare for multiprocessing systems. He said Compaq sells 90 per cent of the Intel-based quad-processor servers sold in Canada. "Compaq is significantly ahead of the market with its quad products." But he pointed out Compaq will be competing only with the low-end of the Unix workstation market.

The Compaq Professional Workstation 6000 starts at a list price of $7,935 for models with a 266MHz Pentium II, 64MB of RAM and a 4.3GB hard drive. The 8000 will be available, early in the third quarter, starting at a list price of $17,250 for models with two 200MHz Pentium Pro processors, 128MB of memory and a 4.3GB hard drive.

## Rainbow Technology aims to sink pirate problem

Software piracy is estimated at over $11.2 billion worldwide, a matter of increasing concern not only to software developers, but to governments and end-users.

The increasing determination to combat software piracy has created a lucrative market for Rainbow Technology's anti-piracy products which are used by software developers and users worldwide.

On June 2, Rainbow Technologies showcased its new Sentinel Wizard, a GUI implementation tool intended to work with the SentinelSuperPro software protection key. The Sentinel Wizard is a piece of software that allows programmers to implement anti-piracy features in their programs with a minimum of difficulty.

For more information, contact http:// www.rainbow.com or call 1-800-852-8569.

## Oracle, Informix settle lawsuit about trade secrets

(NB) — Informix Software Inc. and Oracle Corp. have announced the dismissal of a lawsuit brought against Oracle and 13 engineers who had resigned from Informix in January to join Oracle.

Allegations were the 13 had taken trade secrets with them when they went to Oracle, putting Informix at a competitive disadvantage. The companies compete in the database market.

According to a joint press release the companies stated that "Through discovery Informix has learned that Oracle and the engineers have not misappropriated or disclosed any confidential Informix information and that Informix's trade secrets are adequately protected. Informix regrets any statements or allegations that the engineers misappropriated any trade secrets or disclosed them to Oracle. No monies changed hands."

Informix and Oracle stated neither would have further comment regarding dismissal of the lawsuit.

## Digital will use AMD chips, not Intel, in Venturis PCs

(NB) — Digital Equipment Corp plans to add Advanced Micro Devices' low-priced K6 MMX enhanced processor to its Venturis FX-2 desktop computer line — and not processors from Intel

The K6-based systems join Digital's full line of Venturis FX-2 computers that already use Intel's Pentium and Pentium with MMX processors

According to Patti Foye, vice-president and general manager, commercial desktop business segment in Digital's PC Business Unit, today's announcement offers PC users "a broad choice of processor performance levels at aggressive price points." The AMD K6-based systems are priced 14 per cent less than a similarly performing Venturis FX-2 Intel-based system, Foye said, "using the Winstone 97 benchmark as reference."

## On-line software library allows shoppers to try before they buy

There's too much software in the world In North America, there are more than 50,000 software companies and 250,000 software titles in existence Literally thousands of new titles are added every month to further expand an already impossibly large market. This creates a very difficult situation for both consumers and publishers of software

Consumers would like find out about what software is out there and to try out software before buying it, but few retail outlets can offer the capability to run software on a computer in the store

Publishers would like to get their products in front of the widest possible range of customers but few retail outlets can stock or promote the thousands of different titles available for any particular computer platform, instead concentrating by necessity on a slim selection of a few dozen or at most a few hundred likely sellers

DemoNet offers five ways for users to search for software by a Top 15 Categories, Top 50 Categories Full Index of Titles, Search Engine and Product Code The success of the DemoNet venture would seem to depend on whether publishers will see the advantages of the service, and software users will utilize the site to a sufficient degree to make it a viable marketing and sales medium Contact http //www demonet com or call (562) 308-1000

## CompuServe looking to resume growth in the age of the Web

CompuServe has announced an aggressive marketing campaign intended to expand CompuServe's subscriber base among high-end, sophisticated computer users According to Scott Kauffman, CompuServe's vice-president, "CSi attracts demanding consumers whose work and lifestyle needs are not met by mass consumer services, including a high proportion of business, professional and technical users

To back up their claims of preferred, reliable subscriber access to the wired world, CompuServe activated its new state of the art data center A complete transition of CompuServe-to-Web technology (Web browser and HTML-based) is expected to be completed by the end of the year A mix of 33 6 Kbps, ISDN and 1-800 lines have been deployed to make user access easier and faster The current innovations, CompuServe claims, will result in increases in speed of connecting to the Internet and posting or retrieving information ranging from 50 per cent to 10 times faster

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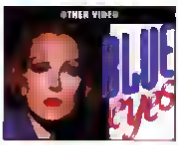
## Canadian PC server market had a good year, says IDC

(NB) — The PC server market continued to grow in 1996, according to International Data Corp (Canada) Ltd. The reasons included a proliferation of local-area networks, sophisticated applications, Internet and intranet activity, and the adoption of such new technologies as the Pentium Pro processor and Windows NT Server. IDC said 36,000 PC servers were shipping in Canada in 1996, up 24.1 per cent from the previous year. Revenue grew 22.1 per cent to $262 million, IDC added. Compaq remain market leader.

## Matrox, ATI battle for PC graphics markets with new cards

At Comdex/Atlanta, the two Canadian titans of the graphics card industry clashed with innovative, affordable new PC graphics cards.

ATI announced the new XPERT@Work and XPERT@Play cards, the former aimed at corporate and SOHO users, the latter at the gaming and entertainment PC user. Both cards offer leading edge 2D and 3D performance, and high quality digital video and DVD support. The XPERT@Play incorporates a TV out feature that allows PC games to be viewed on a television set as well as a computer monitor. The DVD support of the two new cards is quite sophisticated, with motion compensation to give a jitter-free, smooth playback of DVD/MPEG-2 movies. The ATI ImpacTV2 gives output to NTSC or PAL televisions which ATI claims produces "the best flicker-free graphics for big screen and wide screen TVs." ATI also showed its "All In Wonder" card, which includes digital video capture, editing and output options.




Matrox rolled out the Mystique 220 and Matrox 220 Business graphics accelerators. The Mystique 220 is designed for SOHO and entertainment PC users, and comes bundled with consumer games titles, MPEG playback software and optimized drivers. The Matrox Mystique 222 Business bundle includes graphics applications software, including Micrografx Simply 3D2 and Picture Publisher 7. Both new bundles can be further upgraded with the Matrox Rainbow Runner video add-ons, which enable video editing, video conferencing, frame grabbing, hardware MPEG playback, and output to TV from your PC.

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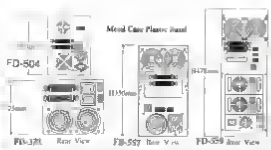


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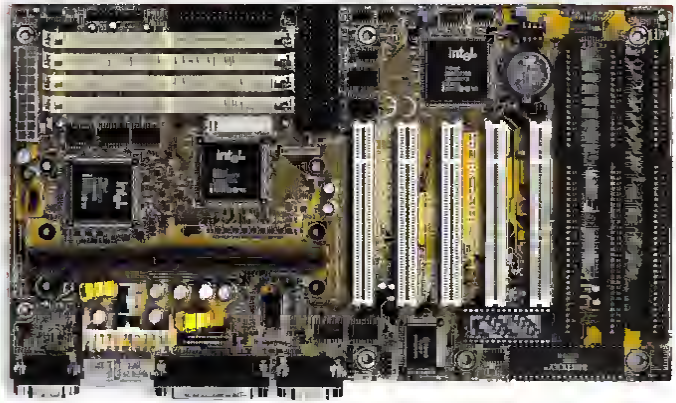

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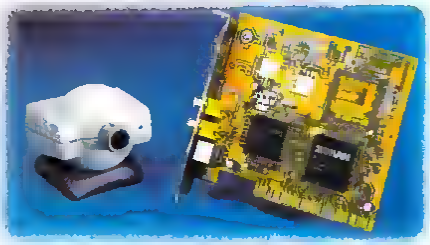

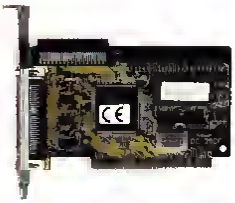

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## Corel Office for Java popular on the Internet, says company

Corel Corp. has announced that tens of thousands of users have downloaded the beta version of Corel Office For Java since April 2, when the official beta version was made available for free download from the Corel Web site (http://www.corel.ca). The Java suite has generated great excitement in the computer market, as it promises to be the most comprehensive business productivity software title yet being developed using the Java programming language.

The suite includes Corel WordPerfect for Java, Corel Quattro Pro for Java, Corel Presentations for Java, InfoCentral for Java, and CorelChart for Java. As a complete integrated suite, the Corel Office for Java goes far beyond most of the other Java software 'applets' shown until now.

According to Corel CEO, Michael Cowpland, "Corel Office for Java demonstrates the power and flexibility of the Java programming environment."

The commercial release of Corel Office for Java is expected before the end of the year, and may be a critical component in the rollout of the first generation of Network Computer devices.

And in preparation for the expected June release of Corel WordPerfect Suite 8, the finalized Released To Manufacturing (RTM) version of the suite was announced on May 20. According to Cowpland, "Corel WordPerfect Suite 8 includes state-of-the-art applications which offer a new level of responsiveness and performance with advanced Internet tools that make publishing and presenting on the Web a seamless process."

The Corel WordPerfect Suite 8 will be sold under a variety of pricing plans, including upgrades for registered WordPerfect users and users of competitive products, and special academic pricing. For more information, contact (613) 728-0826 or see http://www.corel.ca.

## Falling prices are shrinking Canadian printer revenues

(NB) — Revenues from printer sales in Canada dropped 11.5 per cent to $623 million in 1997, according to Evans Research Corp. One reason was a sharp drop in the prices of color ink-jet printers.

Evans Research said the laser printer market is shifting toward the high end, with printers that turn out eight pages or fewer per minute losing favor while demand for those that handle 20 or more pages per minute is growing.

Multifunction peripherals are also increasingly important, with unit shipments reaching 60,000 in 1996 and expected to top 200,000 by 1999, according to the report from Evans.

Revenue growth will resume, but it will be 1998 before revenues match 1995 levels, Evans said. NW

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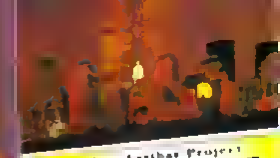


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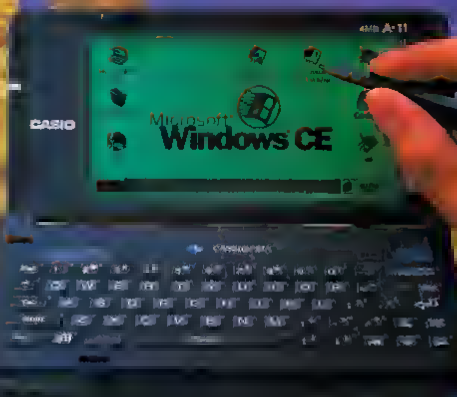

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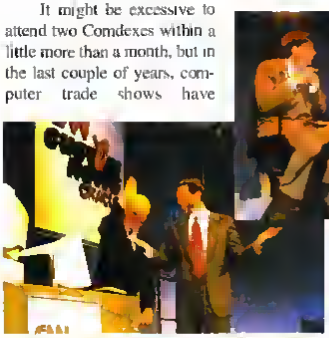
# Comdex — from Atlanta to Toronto!

*by Jeff Evans*

Trade shows are the most intensive way to become immersed in the leading edge of the technology wave — to listen to the big names and visionaries in computing, to get hands-on with the latest hardware and software, and to make personal connections with literally hundreds of computer industry professionals, resellers, end-users and journalists (Plus, there are great parties!)

It might be excessive to attend two Comdexes within a little more than a month, but in the last couple of years, computer trade shows have become less uniform, and more idiosyncratic. Although there will be some overlap in exhibitors between these two Comdex shows, there are literally hundreds of exhibitors who choose to be at either Atlanta or Toronto this year. 1997's Comdex/Spring (June 2 to 5) and Comdex/Canada (July 7 to 9) are two very different shows with significant variations.



## The Last Spring In Atlanta

The 1997 Comdex/Spring was the last Comdex which will ever be held in Atlanta. Last year's show was pre-empted due to the 1996 Summer Olympics, and all future Spring Comdexes will be held in Chicago, where Softbank, the company that owns the Comdex shows, has signed a 10-year lease. So, in a way, this year's Atlanta Comdex was a farewell performance. Some of the big brand names were conspicuous by their absence (Compaq, Dell, AST and Apple were no-shows), but many of the industry's leaders (Microsoft's Bill Gates, Oracle's Larry Ellison) were in attendance, along with many of the leading firms in the industry (IBM/Lotus, Corel, Hitachi, ATI, Matrox).

DVD technology was in the form of real products — with leading edge DVD-compatible graphics cards from ATI, a recordable DVD drive from Hitachi, and an OEM MPEG-2/DVD playback card from Sigma Designs.

Flat panel displays were all over the show floor, with a very impressive 40-inch model from Mitsubishi which can be hung on a wall like a picture (with a very sturdy picture hook — it weighs 63 pounds). Other flat screens were shown by Dolch and Guy, among others.

The Java wave was in greater evidence, with Corel showing a very late beta version of its Corel Office Suite for Java, and IBM demonstrating its own Java-friendly network terminals.

In the graphics field, Fractal Design demonstrated the latest versions of its Painter, Poser, Goo and Designer 3D programs, while at the same time announcing its merger with Metatools to form Metacorp — intended to be a major new player in the graphics field.

Toronto-based MGI demonstrated its release version of Video Wave, a very impressive digital video editing and effects program. Real 3D showed its real-time 3D rendering engines, and Play Inc. showed its soon-to-be-released Trinity digital video system, a US$5,000 wonder which will allow PC owners to match and surpass the video muscle of the legendary Video Toaster.

## I Can See Clearly Now

In a keynote, Microsoft CEO Bill Gates took every opportunity to disparage Java and the Network Computer in comparison to the PC and Windows, a mantra that seems to indicate that he is seriously worried about the potential of Java and the NC to steal market-share and revenues from Microsoft. He became more animated when he discussed his concept of the 'digital nervous system' a metaphor to describe the wired business environment that has been rapidly evolving in the last few years.

Oracle CEO Larry Ellison came on stage without his glasses and discovered that he couldn't see the computer screen clearly enough to demonstrate the new CNN/Oracle on-line news service. He crashed the first PC he was attempting to perform his demonstration on, and then blamed his problems on Microsoft (it 'must have been a Windows bug,' he claimed). He then struggled along on the Network Computer (NC) terminal beside it.

After his glasses finally appeared, showed how the new service will work.

In conversation with *Canadian Computer Wholesaler* after the keynote, Ellison emphasized his belief in the future of Java and the NC, claiming that in a connected world, it makes much more sense to use powerful servers to increase the usefulness of the Internet and other forms of network.

## And On To Hogtown

Comdex/Canada '97 in Toronto will be a substantially different show from Atlanta. Many more PC vendors will be there, taking advantage of Toronto's central position as a focus of decision making in Canadian industry and government. The Canadian high tech community will be out in force, and although some of the same themes will be repeated: Pentium MMX and Pentium Pro, the Internet, DVD, electronic commerce — many of the vendors and the products will be different from those who were in Atlanta, and the seminars will have a Canadian slant. Plus, unlike Atlanta, indications are Toronto will boast a Comdex for years to come. CCW

*Jeff Evans is Associate Editor of Canadian Computer Wholesaler. He can be reached at jeff@tcpon.com*

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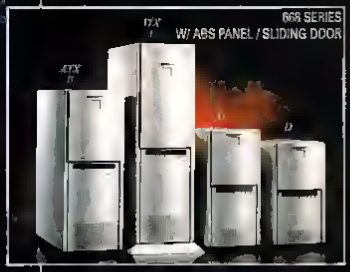


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# Digital TV: The PC's Next Frontier?

*by Jeff Evans*

According to some industry survey statistics, computer monitors are now outselling television sets in some parts of the world. In many households, hours of television watched each week have declined as people spend more time surfing the Web, playing computer games or doing work on the home office PC.

For the giants of the personal computer industry — Microsoft, Intel and Compaq, an enticing opportunity for future growth is 'convergence,' the coming together of the computer, telecommunications and television into one big, integrated mediascape which the PC is ideally suited to exploit. Of course, to Bill Gates of Microsoft, Andy Grove of Intel and Eckhard Pfeiffer of Compaq, the centerpiece of every 21st century home's info-shrine should be a personal computer made by Microsoft, Intel and Compaq.

To this end, the three biggest brand names of the computer biz played the role of the 800-pound gorillas, (As in the old joke, "What does an 800 — pound gorilla do?" Answer: "Whatever he wants,") at the recent National Association of Broadcasters (NAB) show held in early April in Las Vegas.

## Be Reasonable: Do It Our Way

Craig Mundie, the senior vice-president of the consumer platforms group at Microsoft claimed at NAB that a new era of broadcasting and communications is dawning, where the next generation of consumer electronics technology will combine the best of the Web with the best of television.

Both Intel and Microsoft maintain that a digital television device with the power and flexibility of a computer CPU is the best platform for delivering entertainment and information to consumers. The powers that be in the television industry — networks, cable companies, TV program producers and TV and VCR manufacturers — are very dubious about the apparent attempt of the computer nerds to 'hijack' their industry. Compared to the frenetic pace of change in the computer industry, fundamental technical progress in television has been minimal.

The average couch potato in North America is viewing a lousy quality, low-resolution interlaced NTSC picture on his or her home TV set, blissfully unaware that this represents 40-year-old technology that the broadcasters have been too lazy to bother upgrading. Gates and friends have issued a challenge to the television industry, inviting them to get on the bandwagon of the digital future — or else.

Gates has been active in showing the television industry some of the shapes of things to come. He has produced dozens of 'shows' on the Microsoft Network, which are now watched by millions of MSN subscribers around the world. He recently declared his intention to purchase WebTV for US$425 million by the end of the year, to give him a foothold in bringing the Web to non-PC users, via set top boxes and home television sets.

As it stands, the broadcasters are, compared to the young tykes of the PC industry, in a reactive mode, not proactive, in dealing with the PC challenge. There is a lot of hand-wringing and complaining about how technically complex and expensive moving television over to digital standards will be. The Advanced Television System Committee (ATSC), a group mostly recruited from, and serving the interests of, broadcasters and TV manufacturers is pushing for a digital television standard that would offer improved image quality without satisfying the bandwidth requirements for a major interactive computer component. The dividing line is clear — for a host of reasons, many broadcasters are either indifferent or actively hostile to the notion of a two-way Web based interactive component to television. They would be very happy to keep the status quo of broadcasting, a one-way 'top-down' model of mass programming and advertising delivery, and freeze out the computer guys.

Gates and the rest of the PCTV gang will press on regardless. Microsoft and others are recommending that TV tuner hardware be built into the next generation of home PCs as a standard, low cost component, a move which is not comforting to TV set resellers.

If Gates has his way, the market for computer technology in the home could be "an area of huge increase." That prospect should alert PC resellers to what could be the next bonanza for the home PC market. CW

*Jeff Evans is Associate Editor of Canadian Computer Wholesaler. He can be reached at jeff@repon.com.*

## Vendors Align For Digital Television

*by Grace Casselman*

At the 1997 National Association of Broadcasters Convention in Las Vegas, Compaq, Microsoft Corp. and Intel Corp. joined together to make technical recommendations based on a subset of the Advanced Television Systems Committee (ATSC) specifications, with a goal to "greatly accelerate the transition to digital television."

Microsoft, Intel and Compaq want support for the computer industry's video formats, digital data services and support for "intelligence" in the receivers.

They say the interactivity will let users play games, find out more information about any particular program, engage in "chat" discussions, and delve deeper into news or sports events. Both programming and advertising will be able to be geared to specific households, and even family members, say the companies.

Their view of the future doesn't currently exactly line up with the broadcasting industry but the computer companies say millions of PCs will be equipped to receive transmitted digital video and data as soon as 1998.

Compaq says the makers of digital televisions expect to sell one million sets in the next five years — typically coming in at US$2,000 or more per set.

Meanwhile, the computer companies say they'll sell 40 million DTV-enabled PCs in the next five years, 100 million by 2005. (The incremental cost of DTV reception is forecast at about $100 per PC.)

"I think we're going to win this battle on this basis alone," said Bob Stearns, senior vice president of technology and corporate development for Compaq.

Stearns said, "I believe it would be very naive for the computer industry to expect people to watch television on PCs as we now know (TV)." However, he said he expects to see digital TV watched on three different devices:

- The PC.
- The PC/TV — a large screen system with a remote keyboard, allowing for PC-from-the-couch; and PC theatre. "That's here and now," said Stearns. "There's nothing special about it."
- The TV appliance — like today's TV, it will contain "push" content, and viewers will be able to also extract information, for an augmented user experience, said Stearns.

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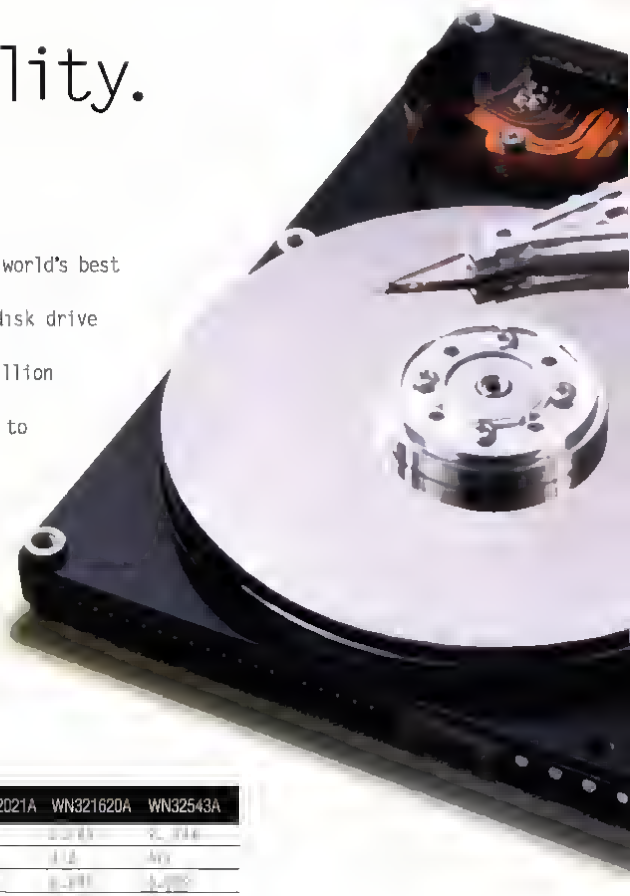

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| Data Transfer Rates | | | | |
| PIO Mode 4 (MB/sec) | 16.6 | 16.6 | 16.6 | 16.6 |
| Multi Word DMA Mode 2 | 46/85 | 50/97 | 46/85 | 63.7/115.2 |
| Buffer Size (KB) | 128 | 128 | 128 | 128 |
| Rotational Speed (RPM) | 4,500 | 4,500 | 4,500 | 5,400 |
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# Nifty Numbers

*Report from Branham*

## Study Pinpoints Success Factors For Canadian Value-Added Resellers

*by Leslie Arrand and Margery Leach*

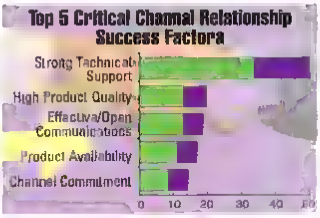
Any software developer that has ever underestimated the importance of a well-conceived product distribution strategy (and survived) will attest to the importance of the channel.

There is a lot more, however, to a good distribution strategy than simply implementing a channel strategy and engaging the right channels. Successful developers recognize that they must continually work with their channels to develop strong, mutually beneficial relationships. They also recognize that this is no simple task: developing and maintaining effective channel relationships challenges even the most successful companies.

In a 1996 study of 150 VARs, system integrators, distributors and dealers from across Canada, Branham determined the key factors that channels believe help to build loyalty and create successful developer-channel relationships.

Based on channel responses, the top five success factors that software developers must fulfill with their channels are:

- Channel commitment,
- Product availability,
- Effective/open communications,
- High product quality, and
- Strong technical support.




It is no surprise with today's constant flow of upgrades, patches and fixes that quality technical support is considered the number one key to successful partnerships. End-users require the best knowledge and support — and who is better positioned to supply the most up-to-date information than the developers themselves?

Channels also demand high product quality, simply because it is far easier to sell products that work, and work well. Open, two-way communication is also critical. The channel is in constant, direct contact with the end user and can provide the developer with useful customer feedback. The proactive software developer will seek out this feedback and incorporate it into future product and marketing plans, to strengthen the relationship with the end-user and increase product sales. One the other hand, the developer knows best the product's functionality and can help the channel drive product sales and ensure customer satisfaction by providing the channel with excellent and up-to-date product information.

While channel organizations place a high value on regular communication with their suppliers, it must be at their own convenience. They far prefer electronic communication methods such as the Internet over face-to-face contact with their software suppliers.

It is incumbent upon software developers and channels alike to strive to maintain effective relationships. With a solid understanding of each partner's requirements, channel relationships will result in long-term benefits for developers, channels, and ultimately the end-user.

*Leslie Arrand and Margery Leach are consultants at The Branham Group Inc., in Ottawa — an international marketing and management consulting firm with a stated commitment to "Delivering Competitive Advantage to the IT Industry". Phone (613) 720-2955, ext. 215, or fax (613) 720-0318.*

**Canadian Market for Ink-jet Printers (1995-1997)**

| | 1995 | 1996 | 1997 |
|---|---|---|---|
| Unit Sales | 657,074 | 901,039 | 1,059,926 |
| Unit Growth | | 37% | 18% |
| Average Selling Price | $405 | $271 | $207 |
| Revenues (Millions) | $266.2 | $244.5 | $219.9 |
| Revenue Growth | | -8.2% | -10.5% |

Source: Evans Research Corp.

VOICE YOUR OPINION

## Reader Poll

**We Asked You:**

What is your opinion of Comdex/Canada's decision to raise the entry age limit from 16 to 21?

**You said:**

4% Comdex took an appropriate action in raising the age of admittance to 21 years of age.

74% Comdex should have stuck with the previous age of admittance of 16 years of age.

22% There should be no age limit for attendees at the Comdex computer tradeshow.

**This Issue:**

While attractive, high resolution flat-screen displays, based on LCD technologies, are a norm on today's notebook computers, the manufacturers are marketing increasing numbers as desktop displays. However, the traditional cathode-ray tube (CRT) monitors continue to dominate the desktop. Which most closely reflects your view of the flat-screen market?

- ☐ There is a lot of interest in flat-screen displays, and we expect to see significant growth in demand for those products.
- ☐ Flat-screen displays for the desktop will see success in certain markets, but for now won't attract mainstream buyers until the prices come down a little.
- ☐ Flat-screen displays are just a niche market, and are far too expensive for the average customer.

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# Silicon Du Nord Spawns Noteworthy Software

*by David Tanaka*

| Company | Product Name | Technology |
|---|---|---|
| G & A Imaging Ltd | Photo Recall | digital image organizer |
| Unicate Network Inc | Unicate Projects | project time billing |
| Softkit Technologies | Live Access | desktop document management |

There's no doubt that Quebec has a few technology stars. Matrox with its video graphics cards, Protec Microsystems for networking products and Softimage, which Microsoft has scooped up, for example. But we don't tend to think of the province as a software centre, particularly for the shrinkwrap retail stuff. That may soon change. Over the past few months, I've seen three innovative software projects coming out of Quebec. They are all still a little rough around the edges, one being a Version 1.0 product, another just going through the commercialization process and the third in beta.

However, they show a lot of promise.

G & A Imaging Ltd. in Hull, Que., introduced a consumer retail product called PhotoRecall Version 1.0 this year. The product taps into the emerging consumer digital photography market. Some in the industry observe a growing desire amongst consumers to take those boxes of holiday and family snapshots and turn them into custom greeting cards, T-shirt images and other personalized what nots.

The tools to satisfy that desire include inexpensive scanners and color inkjet printers, and easy-to-use image editing and layout tools on the software side — which is where Photo Recall fits in.

Photo Recall is primarily a digital image organizer. It allows users to categorize, sort, view and retrieve digital images. The program also includes a digital album creator, and a special effects image editor, but these are fairly lightweight modules.

Another strictly business application is Unicate Projects, from Unicate Network Inc. of Sherbrooke, Que. Unicate Projects is a comprehensive project time-billing package. It comes in workstation and administrator versions. You can set up pay and overtime rates and holiday schedules; you can organize by departments and by project, and keep track of expenses and time spent. When you set up a project you can estimate time for completion, along with a budget estimate. The program then tracks the times and expenses of the workers assigned to the project.

There's a timesheet that a worker can "punch in" whenever they start on a project and then "punch out" when they move on to something else. They can track billable time for number of different projects from a single window. In all, it's a slick piece of work. Unicate calls the current product Version 2.1, and has given it a suggested price of $329.

Project organization of another flavor is the mission of Live Access, a product being developed by Softkit Technologies in Montreal. Live Access is a desktop document management system that allows you to visually organize the documents on your hard drive into projects. It has a modern and stylish interface, a la Windows Explorer.

One of the biggest drawbacks to desktop document management systems is data duplication. Typically you have your native file, plus another file in the document management system's proprietary format. Live Access makes extensive use of OLE to create a database of links and pointers, rather than a separate copy of the file. CCW

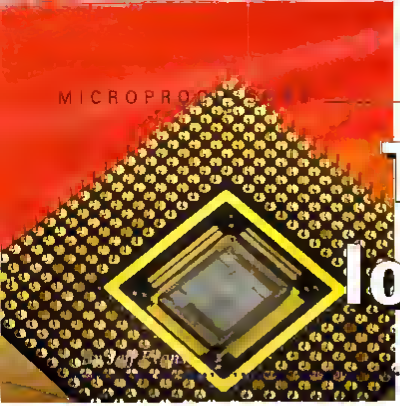
Contacts:

G & A Imaging Ltd., Hull, Que.
Call: (819) 772-7600
http://www.ga-imaging.com

Unicate Network Inc., Sherbrooke, Que.
Call: (819) 822-3111
http://www.unicate.com

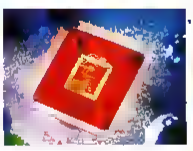
Softkit Technologies Inc., Montreal
Call: 1-888-softkit, (514) 393-3467
http://www.softkit.com

*David Tanaka is a Vancouver-based journalist specializing in high technology and is News Editor of The Computer Paper. He can be reached at david@tcp.ca.*



# The King is dead, long live the King!

**As the 'classic' Pentium microprocessor moves off centre stage, a host of new CPUs are jostling to become the king of the PC market-place.**



About 80 per cent of the personal computers sold worldwide in 1996 carried Intel microprocessor CPUs inside them, according to figures from market research firms such as International Data Corp and Dataquest. 'Intel Inside" is not only a brilliant marketing slogan and brand promotion, it is the simple description of the reality in today's PC industry. Intel seems dominant and unbeatable. A 'no-brainer' for many PC resellers to choose as the basis for their business — for now, at least. But what about next year, or the year after that?

The so-called "Moore's Law," named after one of Intel's founders — Gordon Moore, states that as a rule of thumb the maximum processing speed of the 'state of the art' microprocessor doubles every 18-24 months, while prices remain the same or decline. Intel dominates today's PC microprocessor market as thoroughly as Microsoft dominates PC operating systems and business application software.

Uneasy rests the head that wears the crown, however. In the case of the microprocessor market, Intel faces challenges from rival CPU makers, from fundamental changes in the nature of computing devices, from approaching limits to the improvement of silicon lithographic chipmaking technology, and finally, from a hovering flock of lawyers. Intel CEO Andy Grove said it all in the title of his recent book: "*Only the Paranoid Survive.*"

## A Year Of Transition

According to Doug Cooper, Canadian marketing manager at Intel of Canada Ltd., 1997 is a year of unparalleled transition in the Intel microprocessor line, with no fewer than four families of Intel Pentium processors holding a significant piece of the market: 'classic' Pentium, Pentium II, Pentium with MMX and Pentium Pro. Pentium with MMX, incorporating Intel's multimedia acceleration technology and extra on-chip cache memory, has rapidly come down in price, and become more attractive to mainstream home and business PC buyers.

As use of Microsoft Windows NT by businesses and power users has exploded, the Pentium Pro microprocessor has moved from an exotic choice to common place. The latest line of Intel CPU, the Pentium II, incorporates elements of both MMX and Pentium Pro technology. Intel has aggressively moved to develop low power versions of the Pentium with MMX chips for use in notebook computers; low-powered versions of Pentium II with MMX, and Pentium Pro can be expected as well.

## They Also Run: The Competition

There's lots of competition to Intel out there in the PC microprocessor market-place, and none of it is managing to do much more than just hang on at this time.

At the high-end, Digital Equipment Corp. has its Alpha chip, a speed demon that, along with Digital's system integration skills, results in computer solutions that beat any Intel based computer in terms of raw performance. Cooper comments drily however: "from a performance standpoint, Alpha has done well, but UNIX users are shifting to NT, and in the NT market, Intel is preferred." End of debate? Digital is striving, with some success to increase sales of Alpha chip based servers and workstations, but the comparative lack of Windows software compiled to run natively on the Alpha-compatible version of Windows NT is a major handicap.

Similarly, the PowerPC chip, developed by Apple, IBM and Motorola as a higher-powered alternative to Intel, has not been able to continue delivering on its early promise. The PowerPC consortium was slow to develop a version of the PowerPC architecture that would run the Apple Mac Unix, NT and Windows operating systems and applications software on the same system: the so-called Common Hardware Reference Platform, or CHRP. The failure of the PowerPC consortium to come out of the gate with CHRP in the early 1990s meant that the PowerPC market was fragmented into Mac only and UNIX or Windows NT only segments, and this has limited the market prospects of the PowerPC alternative.

The MIPS microprocessor, originally developed by a subsidiary of Silicon Graphics, and manufactured by a variety of licensees, seems to have decisively failed to remain a contender in the Windows PC microprocessor market. Variants of MIPS chips, however, are being sold in devices as different as the Nintendo 64 video games machine, set top boxes, and Silicon Graphics workstations, servers and supercomputers.

## Send In The Clones

Some microprocessor makers have opted to create clones of Intel chips, which offer the advantage of complete compatibility with Wintel hardware and software. Cyrix Corp. and Advanced Micro Devices Inc. (AMD) are the best known of these companies, but their histories, of successes alternating with disasters, have made resellers

wary about committing wholeheartedly to these alternative CPU vendors. Currently, Cyrix offers the 6x86L (the 'L' stands for low power) microprocessor as its top of the line alternative to Intel products. The 6x86L corrects earlier problems the original 6x86 chip had with overheating. The Cyrix chips are used by quite a few manufacturers as a budget alternative to brand-name Intel chips, and they have good quality and performance. However, whether by coincidence or design, the latest models of Intel chips require motherboards and chipsets that aren't automatically compatible with Cyrix chips.

AMD posed an apparently serious threat to Intel at various times in the late 1980s and early 1990s, with its 486 clone chips. However, the company had serious difficulties with some models of Pentium clone chips, and lost what had appeared to be an excellent shot at becoming a microprocessor giant. On April 2, AMD announced that it had begun shipping its long awaited AMD-K6 MMX processor, and claimed that the K6 "marks the return of competition in Windows-compatible processors." The K6 is a very sophisticated microprocessor, based on the six-issue RISC86 superscalar microarchitecture, and is claimed to be "smaller, faster, easier to use, more energy efficient and less expensive than Pentium Pro, making it the superior engine for Windows Computing," according to W.J. Sanders, the CEO of AMD. The K6 is also designed to be compatible with the Socket 7 environment, giving resellers a widely available and economical range of motherboards, BIOS and chipsets to use with the K6.

On balance, whenever Cyrix or AMD come out with microprocessors that are proven to be reliable and which are competitive in performance with current Intel models, at lower price points, a budget-minded segment of resellers and end users happily embraces them. Unless Cyrix and AMD establish an unbroken chain of successful products, and develop some brand name credibility, however, they are likely to remain marginal players, laboring in the wake of Intel.

## The Morphing Of The PC

The PC as we currently know it may become a minority player in the world market for computing devices. Network Computers (NCs) may become a major market unto themselves, and they can use any microprocessor and accompanying chipset that will run a Java 'virtual machine' to operate Java applications on a network.

Early NCs exist with ARM, Hitachi, Intel and other CPUs. Java and the NC, if successful, could break the Wintel PC paradigm and open up a whole new race for the top microprocessor. On the other hand, Microsoft and Intel are racing to strangle the NC in its cradle, with their Net PC and Windows Terminal initiatives.

Palmtop computers running Windows CE are based on a variety of microprocessors, including Philips and Hitachi chips. Apple's MessagePad 2000 and E-Mate 3000 portable devices are based on the StrongARM RISC chip. Other quasi-computer devices that don't need to run Windows software — phones with E-mail capabilities, Web browsing set top boxes for your TV — all may take some new user sales away from Wintel if they catch on. For resellers, the coming proliferation of non-standard computers may dilute Intel's dominance, but they are unlikely to displace Intel entirely.

## Hitting The Wall

At some point in the next decade, the current microprocessor technology is expected to run into some fundamental physical limitations at the molecular level. It simply won't be possible to make smaller components to pack more transistors into a chip, as the natural movement of atoms will interfere with the functioning of the chips.

## Now, Wait Just One Atom-Picking Minute

IBM's development of 'atom-picking' technology that can literally build machines atom-by-atom is considered to be one of the routes that computer makers will be attempting to use over the next few years to continue to improve microprocessor performance.

Nanotechnology, which involves molecular manipulation to create submicroscopic machines, is science fiction today. However so was the microprocessor technology built into a cell phone or a laptop computer not so long ago. There are even research initiatives to create organic computers, and nano-machines that derive their power source from the living bodies in which they will be embedded.

## Mars, this is Earth — The Digital Lawsuit

Back in the real world of 1997 however, a much more mundane technology — that of the civil lawsuit, is raising at least a slight prospect that high-flying Intel could be brought to Earth, on the grounds of alleged theft of intellectual property.

Intel has responded with a countersuit, and at least an implied threat to cut off Digital from access to Intel products which Digital uses in many of the computers it sells.

But whatever the outcome of this court case, it is worth noting Intel's competitors don't seem confident of being able to push Intel off the microprocessor throne by getting customers to abandon that "Intel inside" sticker. CCW

*Jeff Evans is Associate Editor of Canadian Computer Wholesaler. He can be reached at jeff@tcpon.com*

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# Mid-Range Pentium Systems

by Jazz [illegible] Tim Bingham-Willis and Steve Halliday

## *New capabilities mean more appeal for demanding customers!*

If the current trends in enhancements of Pentium processor technology continue, soon personal computers will look nothing like they do today and probably function quite differently. But whatever they look like and whatever they cost, they will be an integral part of our corporate infrastructure.

Intel's much-anticipated new Pentium processor with MMX technology has made an unexpected expedited entry into the desktop market. The enhancements that MMX technology adds to the new Pentium processors mean more than simply faster processors. Intel has added 57 new instructions that accelerate specific computational loops in multimedia and communications applications, the technology incorporates a Single Instruction Multiple Data (SIMD) paradigm, allowing CPUs to perform one calculation on multiple data values simultaneously, boosting performance. In MMX-enabled software, the new technology will benefit such operations as 3D graphics rendering, image, video playback, and even audio.

These new enhancements are welcomed by graphic artists and multimedia developers. Even more rejoicing comes from gaming professionals who believe MMX was designed for games, especially when the anticipated benefits include branching interactive video, increased color depth, and higher frame rates. For those who can't have enough full motion video in the games, Intel promises MMX video will have much better quality, higher resolution, and improved color depth. This means that MMX will allow the ability to wander through filmed rooms with sharp, best-looking full screen video to date. Furthermore, MMX allows multiple video execution simultaneously on the screen without any performance degradation. This is the single most powerful addition that will allow far more interactive applications than we have ever seen.

How does MMX perform in the real world? Results in our lab tests indicate performance increases between 10 to 15 per cent. Although we must point out that our tests lacked software that was MMX-optimized. The MMX Pentium still performed faster because of its large 32KB cache — that's 16KB more compared to 16KB cache in non-MMX Pentiums. Even with MMX-optimized software, we don't expect to see anything like a doubling in performance at the same clock speed. An Intel spokesperson agreed that the 15 to 20 per cent performance increases were observed with one MMX-enabled product consistent with the company's expectations for typical MMX application.

### Pentium II

The Pentium II CPU is here. Like the Pentium, the Pentium II is based on Intel's P6 architecture. In addition, it features support for all 57 MMX instructions, improved 16-bit performance, and new chip packaging that will let system and motherboard vendors move to future CPUs more rapidly than ever. But of course that is another story.

Every month new technological advances are made. Newer processors are emerging as are faster RAM technologies, faster and larger displays, and larger storage devices. Just over a year ago processors were at 133MHz, today the Pentium II processors are at clocking speeds of 266MHz. That's double the speed! This phenomenal growth of processor power will drastically change the we way we do business and live before and after the year 2000.

### Our Tests

We asked vendors to send us machines configured with 166MHz MMX processors and 32MB of RAM. We left the remaining system components up to them, so long as they fit into the category of "mid-range." Our tests were conducted using the BAPCo benchmark suite of applications. All machines were configured to run in a resolution of 800 by 600 with a 16-bit color depth (65,536 colors).

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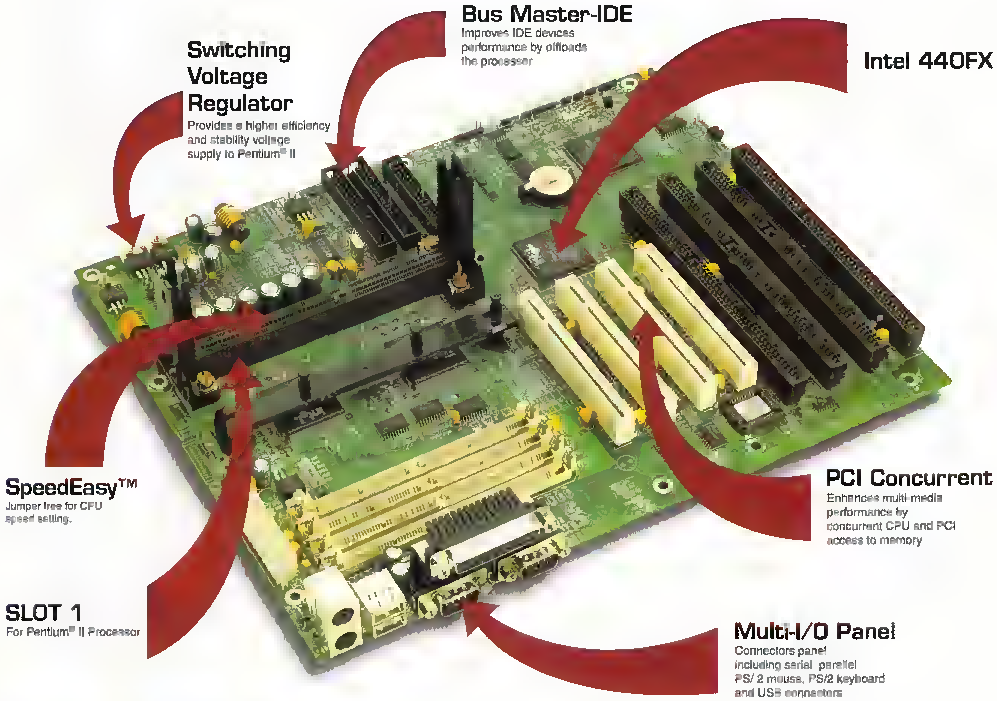


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QDI COMPUTER (MONTREAL), INC 2645 Halpern Street St Laurent Quebec H4S 1P8 Canada Tel 1-514-3356011 Fax 1-514-3356022



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CE FC

## Compucon CP5M166XTX

***Suggested Retail Price*** $2,995

***Reseller Authorization*** Based on vicinity

***Support For Resellers***
Co-op advertising
Reseller referrals
Resellers are listed on the Web site.
POP displays
Two-year warranty includes parts and labor
Web site includes technical information

***Volume Discounts***
Yes, reviewed on a case-by-case basis

***Demo Unit Availability And Restrictions***
One system per authorized reseller at a 10 per cent discount.

***Compucon's View Of The Market:***
"Compucon CP5TX systems are for all markets of standalone or networked desktop and workstations for home/SOHO/offices," says Alan Ng, president of Fastech Computer Ltd

***System Strengths***
"All Compucon systems are designed to meet industrial server standards as if they will be running 24 hours non-stop. All components and internal system layout are well selected and engineered, says the company.

***Editors' Notes***
From Fastech Computer Ltd comes this Compucon system, packed with high-quality components that are sure to please any computer enthusiast. To start off, the system uses the latest motherboard from ASUS, the TX97, which incorporates the new 430TX chipset from Intel. The machine is driven by a 166MMX processor and is backed by 512Kbps of pipelined cache and 32MB of SDRAM. The graphics subsystem consists of a WinFast 3D L2200 accelerator with 4MB of EDO RAM onboard. This card has helped systems from Compucon place among the fastest in their class when it comes to graphics performance. Multimedia accessories include a Sound Blaster 32 sound card, a new 24X CD-ROM from Panasonic, and a pair of 150W speakers. The 4.3GB Quantum Fireball ST with the new ATA-3 interface will provide more than enough storage room, as well as help overall system performance

## Sygma VS 5166MMX

***Suggested Retail Price*** $2,628

***Street Price*** $2,498

***Reseller Price*** $2,298

***Support For Resellers***
Co-op advertising
Reseller referrals
Two-year warranty includes parts and labor
Toll-free tech support for resellers
Web site includes technical information and drivers

***Demo Unit Availability And Restrictions***
Demo units have to be displayed for minimum period of 30 days

***Editors' Notes***
This system has everything you need to get you up and running right out of the box, with a few extra goodies on the side all for just under $2,500. To start off, we have the 166MMX processor, 512Kbps of pipelined secondary cache and 32MB of EDO RAM, as well as the new 430TX chipset from Intel, all neatly laid out on an ATX form factor motherboard. For superior graphics, the system includes a Matrox Millennium card with 2MB of WRAM onboard, and a Diamond Monster 3D card using the 3DFX chipset. The remaining components are top-notch as well, from the Sound Blaster 16 sound card to the 3.1GB Western Digital hard drive to the high speed Panasonic 24X CD-ROM drive. The latest from U.S. Robotics is also found inside the box — this new Sportster X2 56Kbps fax modem. Combine all of this with a pair of Yamaha M15 speakers, a microphone and a score of 188 on our benchmark suite, and you have yourself the makings of an excellent system at a very competitive price

## Elco Systems

***Suggested Retail Price*** $1,720

***Support For Resellers***
Co-op advertising
Reseller referrals
Three-year warranty includes parts and labor

***Elco's View Of The Market***
"Our system is suitable for home and small business use as a well as the educational market-place," says Stanley Tam, marketing manager at Elco

***Editors' Notes***
A new contender to our Lab Tests this month is this system from Systems. The machine consists of a 166MMX processor, 512Kbps of Level-2 cache, 32MB of EDO RAM, a Matrox Millennium video card with 2MB of WRAM onboard, and a 2.6GB hard drive from Fujitsu. For your multimedia needs, you get a Sound Blaster 32 sound card and a Cyber 16X CD-ROM drive. Rounding out the system is the very popular 33.6Kbps voice/fax modem from SupraExpress. System performance was good with an overall score of 171.

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## Express Micro

***Suggested Retail Price*** $3,999

***Street Price.*** $3,599

***Reseller Authorization***
Reseller candidates cannot be geographically located near existing authorized dealers. Authorization is at the discretion of the company.

***Support For Resellers***
Co-op advertising
Reseller referrals
POP displays
Five-year warranty includes parts and labor
Dedicated technical BBS
Dealer-specific space on Web site

***Demo Unit Availability And Restrictions***
Every three months demo unit rebates are available for authorized resellers, per location.

***Express Micro's View Of The Market***
"Express Micro MMX 166 is a high performance system for the multimedia digital video and business power user," says John Wong, director of marketing at Advance Interface.

***Editors' Notes***
Advance Interface sent us this fully loaded machine ready to handle just about anything you throw at it. To start, it has the requested 166MHz MMX processor, 512Kbps of pipelined cache and 32MB of SDRAM, and nothing but the best components money can buy: a Matrox Millennium video card with 4MB of high speed WRAM onboard, a Quantum Fireball ST hard drive with a capacity of a whopping 4.3GB, Creative Labs' Sound Blaster AWE64 sound card and the latest in CD-ROM technology from Panasonic, this new 24X drive. It may look like an ordinary floppy on the outside, but it's actually the new LS-120, from Imation. This new high-capacity floppy drive is capable of reading and writing to a new type of media virtually identical in appearance to a regular floppy disk, but with a capacity of 120MB. A very complete system, with an excellent five-year warranty on labor and three years on parts.

## IBM PC 350

***List Price*** $2,365

***Reseller Price*** $2,200 (estimated)

***Reseller Authorization***
To sell IBM products, resellers must obtain IBM authorization.

***Support For Resellers***
Co-op advertising
Reseller referrals
Three-year warranty includes parts and labor
Web site includes technical information and drivers

***Demo Unit Availability And Restrictions*** Yes

***Editors' Notes***
The system lacks many features found on most other systems in this survey, such as a sound card or CD-ROM drive. The machine we reviewed came equipped with 16MB of EDO RAM, 256Kbps of pipelined cache and a 166MMX processor. For storage space, you get the popular Western Digital 2.5GB model, which offers not only excellent performance but adequate storage space. IBM also includes a copy of Lotus SmartSuite 96 at no additional cost. The machine's video subsystem is fairly basic, consisting of a 1MB S3 Trio64V+ card, which will offer a maximum resolution of 1,024 by 768 at 256 colors. For an additional $608, your customers can have IBM's 15-inch model G50 monitor.

## KTX Enforcer

***Suggested Retail Price*** $2,990

***Street Price*** $2,299

***Reseller Price*** $2,099

***Reseller Authorization*** No

***Support For Resellers***
Reseller referrals
National advertising
Two-year warranty includes parts and labor
Web site includes technical information

***Volume Discounts*** Yes

***Demo Unit Availability*** Yes

***Edge's View Of The Market***
"This product is aimed at customers requiring high performance and excellent value, SOHO," says Campbell Angus, general manager of Edge Wholesale, distributors of KTX systems.

***Editors' Notes***
This very capable desktop system is configured with a Pentium 166MMX processor, 512Kbps of pipelined cache and 32MB of SDRAM, all situated on a Tyan Titan Turbo motherboard, making use of the latest 430TX chipset from Intel. For maximum graphics performance, the system uses a Matrox Millennium video card with 4MB of WRAM onboard. Storage comes in the form of a 2.5GB hard drive from Maxtor, and for multimedia, includes the popular ESS 1868 chipset and a Mitsumi 16X CD-ROM drive. Rounding out the system is a 33.6Kbps fax modem from Wisecom and a pair of 120W multimedia speakers.

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# Mid-Range Pentium Systems

July 97

| | Comtronic A-Open | Empaq Azura | Compucon CPSM166XTX | Daiwa | Elco Systems | Express Micro | IBM PC 350 |
|---|---|---|---|---|---|---|---|
| Processor | Pentium 166 MMX | Pentium 166 MMX | Pentium 166 MMX | Pentium 166 MMX | Pentium 166 MMX | Pentium 166 MMX | Pentium 166 MMX |
| Cache Size | 512Kbps pipeline | 512Kbps pipeline | 512Kbps pipeline | 512Kbps pipeline | 512Kbps pipeline | 512Kbps pipeline | 256Kbps pipeline |
| Motherboard | Acer AP5VM | ASUS | ASUS TX97-X | | Twister 566HX | | N/A |
| Chipset | 430VX | 430TX | 430TX | 430VX | 430HX | 430TX | N/A |
| RAM | 32MB EDO | 32MB EDO | 32MB SDRAM | 32MB EDO | 32MB EDO | 32MB SDRAM | 16MB EDO |
| Video Card | S3 ViRGE | ATI 3D Pro Turbo +PC2TV | WinFast 3D L2200 | Matrox Millennium | Matrox Millennium | Matrox Millennium | S3 Trio64V+ |
| Video Memory | 2MB EDO | 4MB SGRAM | 4MB EDO | 2MB WRAM | 2MB WRAM | 4MB WRAM | 1MB EDO |
| Monitor | None | None | None | None | None | None | None |
| Sound Card | Acer FX-3D | Sound Blaster AWE32 | Sound Blaster 32 | Sound Blaster 32 | Sound Blaster 32 | Sound Blaster AWE64 | None |
| Hard Drive | JTS C2000 2.0GB EIDE | Seagate 2.5GB EIDE | Quantum Fireball ST 4.3GB UIDE | Western Digital 3.1GB EIDE | Fujitsu 2.6GB EIDE | Quantum Fireball ST 4.3GB UIDE | Western Digital 2.5GB EIDE |
| CD-ROM Drive | Acer 16X | Toshiba 16X | Panasonic 24X | Panasonic 24X | Cyber 16X | Panasonic 24X | None |
| Modem | Acer 33.6 | GVC 33.6 | None | Wisecom 33.6 | SupraExpress 33.6 | Digicom 33.6 | None |
| System BIOS | AMI | Award | Award | Award | Award | Award | IBM |
| Operating System | Windows 95 | Windows 95 | Windows 95 | Windows 95 | Windows 95 | Windows 95 | Windows 95 |
| Extras | | | 150W speakers | | | LS-120 Floppy Drive 160W speakers | |
| Windows Benchmarks | | | | | | | |
| Desktop Publishing | 149 | 164 | 171 | 157 | 155 | 141 | 131 |
| Desktop Graphics | 269 | 273 | 296 | 331 | 273 | 281 | 233 |
| Desktop Presentation | 174 | 186 | 183 | 202 | 176 | 168 | 142 |
| Word Processing | 153 | 164 | 165 | 169 | 157 | 126 | 126 |
| Spreadsheet | 183 | 187 | 185 | 211 | 161 | 151 | 162 |
| Database | 145 | 155 | 154 | 161 | 147 | 153 | 124 |
| Sysmark 32 | 169 | 176 | 178 | 191 | 171 | 167 | 143 |
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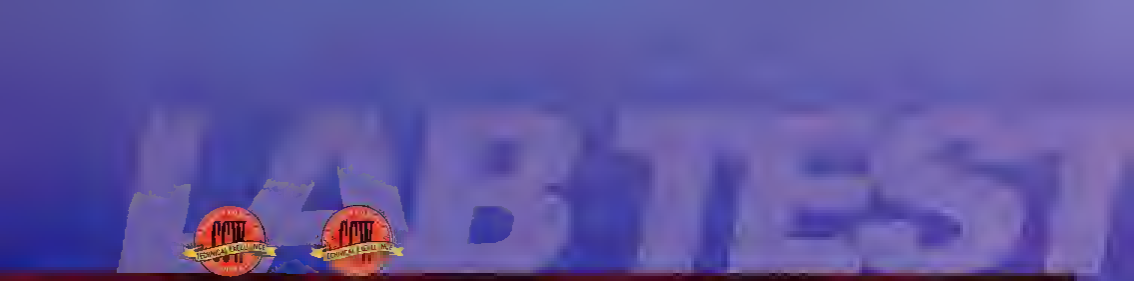
| Internet Contact | www.comtronic.com | www.empac.com | www.compucon.com | | | www.elcel.com | www.pc.ibm.com |
| Suggested Retail Price | $1 692 | $1 950 | $2 995 | $1 999 | $1,720 | $3 999 | $2,365 list |
| Street Price | $1 528 | | | | | $3,599 | N/A |
| Reseller Price | $1 415 | $1,777 | | $1,839 | | | $2 200 estimated |
| Warranty (years:labor, parts) | 2L, 2P | 2L, 2P | 2L 2P | 2L, 3P | 3L, 3P | 5L, 3P | 3L, 3P |



| | July 97 | July 97 | | | | | |
|---|---|---|---|---|---|---|---|
| **KTX Enforcer** | **Mynix Mycomp** | **NEC PowerMate P2166M** | **Packard Bell CAN PLT 2015** | **Samtack Pine** | **STD** | **Sygma VS 5166MMX** | **Ultinet** |
| Pentium 166 MMX | Pentium 166 MMX | Pentium 166 MMX | Pentium 166 MMX | Pentium 166 MMX | Pentium 166 MMX | Pentium 166 MMX | Pentium 166 MMX |
| 512Kbps pipeline | 512Kbps pipeline | 256Kbps pipeline | 256Kbps pipeline | 512Kbps pipeline | 512Kbps pipeline | 512Kbps pipeline | 512Kbps pipeline |
| Tyan Titan Turbo | Mycomp TI5TT | | | | | | |
| 430TX | 430TX | 430HX | | 430TX | 430TX | 430TX | 430HX |
| 32MB SDRAM | 32MB EDO | 32MB EDO | 32MB EDO | 32MB EDO | 32MB EDO | 32MB EDO | 32MB EDO |
| Matrox Millennium | Matrox Mystique | ATI 3D Rage II | S3 ViRGE | Trident 9685 | S3 ViRGE 3D | Matrox Millennium | Matrox Millennium |
| 4MB WRAM | 2MB SGRAM | 2MB SGRAM | 2MB EDO | 1MB DRAM | 2MB EDO | 2MB WRAM | 4MB WRAM |
| 15-inch | None | None | 15-inch | None | 15-inch | None | None |
| ESS 1868 | ESS 1868 | Sound Blaster 16 | SND3-336 | Yamaha 16 bit | Sound Blaster AWE32 | Sound Blaster 16 | Sound Blaster 16 |
| Mextor 2.5GB EIDE | Quantum Firebell ST 4.3GB UIDE | Western Digital 3.1GB EIDE | Seagete 2.1GB EIDE | Fujitsu 2.6GB EIDE | Quantum 2.1GB EIDE | Western Digital 3.1GB EIDE | Quantum Fireball 3.2GB EIDE |
| Mitsumi 16X | BTC 12X | Goldstar 16X | Goldstar 16X | Goldstar 16X | Panasonic 24X | Panasonic 24X | Panasonic 24X |
| Wisecom 33.6 | None | None | SND3 336 | Acer 33.6 | Wisecom 33.6 | USR Sportster X2 56 | USR 33.6 |
| Award | Award | AMI | AMI | AMI | Award | Award | Award |
| Windows 95 | Windows 95 | Windows 95 | Windows 95 | Windows 95 | Windows 95 | Windows 95 | Windows 95 |
| 120W speakers | | Microphone | | 80W speakers | | Yamaha M15 | 80W speakers |
| | | Multimedia speakers | | Microphone | | Speakers | |
| | | | | | | Microphone | |
| | | | | | | Diamond Monster 3D | |
| 170 | 173 | 153 | 126 | 150 | 160 | 158 | 160 |
| 277 | 337 | 272 | 189 | 235 | 268 | 331 | 295 |
| 198 | 209 | 184 | 154 | 170 | 176 | 194 | 194 |
| 171 | 174 | 164 | 147 | 156 | 163 | 162 | 163 |
| 203 | 217 | 186 | 178 | 179 | 190 | 210 | 206 |
| 170 | 169 | 154 | 150 | 136 | 164 | 165 | 164 |
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| $2,299 | $2 295 | $2 199 | | | $1 999 | $2,498 | $1,998 |
| $2,099 | $2,095 | $1 966 | | | $1 945 | $2,298 | $1,895 |
| 2L, 2P | 3L, 3P | 3L, 3P | 1L, 1P | 2L, 2P | | 2L, 2P | 2L, 2P |

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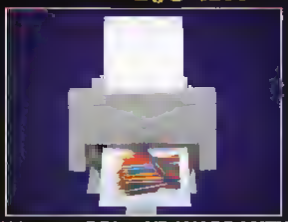

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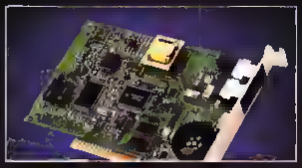

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Software Focus: Voice Recognition

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## NEC PowerMate P2166M

***Estimated Street Price:*** $2,199

***Reseller Price:*** $1,866

***Support For Resellers:***
Co-op advertising
Reseller referrals
Three-year warranty includes parts and labor
Dedicated technical BBS
Web site includes technical information and drivers

***Volume Discounts:*** Yes

***Demo Unit Availability:*** One unit per reseller location

***NEC's View Of The Market:***
"PowerMate P2166M and PowerMate P2200M provide corporate users with improved overall performance and faster multimedia processing, as well as a full suite of software manageability tools designed to significantly reduce the total cost of ownership" says Gord Neff, manager of systems products for NEC Computers Systems Division Canada.

***Editors' Notes:***
If your customers are looking for a system bearing a name you recognize and want a nice combination of popular components, the NEC PowerMate line of computers are just they you need. The model we tested was the 2520-24874C which consists of the following configuration: a 166MHz Pentium MMX processor, 256Kbps of pipelined cache, 32MB of EDO RAM, an ATI video card using the latest 3D Rage II chipset configured with 2MB of SGRAM, a Sound Blaster 16 sound card, a 3.1GB hard drive from Western Digital and a Goldstar 16X CD-ROM drive.

## Empac Azura

***Suggested Retail Price:*** $1,950

***Reseller Price:*** $1,777

***Marketing Support For Resellers:***
Toll-free line in to resellers
National advertising

***Maintenance And Technical Relationship With Resellers:***
Two-year warranty includes parts and labor
Dedicated technical BBS
Web site includes dealer-specific space, technical info and drivers

***System Strengths:***
"Our system is cost effective, ready to build, customer configuration," says Susan Hu, purchasing manager at Empac.

***Editors' Notes:***
The Azura system we received this month has a nice mix of components that will satisfy anyone looking to buy their first MMX system. Its configuration consists of a Pentium 166MMX processor, 512Kbps of pipelined cache, an ATI 3D Pro Turbo +PC2TV video card with 4MB of SGRAM, an SB AWE32 sound card, and a Seagate 2.5GB hard drive. The ATI video card will provide good performance for most graphics-related applications, and will deliver high resolutions thanks to its complement of 4MB of RAM. The card also has the ability to redirect the PCs output to a large screen TV. This system also includes a Toshiba 16X CD-ROM drive and a GVC 33.6Kbps fax modem. As far as performance goes, the system scored 178 on our benchmark suite, which was pretty well the average for this month's review.

## STD

***Suggested Retail Price:*** $2,299

***Street Price:*** $1,999

***Reseller Price:*** $1,849

***Support For Resellers:***
Co-op advertising
Reseller referrals
POP displays
Two-year warranty includes parts and labor
Toll free tech support for resellers
Web site includes technical information and drivers

***Demo Unit Availability And Restrictions:***
One demo unit per model per store location

***STD's View Of The Market:***
"The Pentium TX Chipset is the latest Pentium chipset. With the enhancement of multimedia, this product is targeted for the home user in the future when the price comes down," says Wilson Wai, project coordinator at STD.

***Editors' Notes:***
The system we received from STD this month is a great example of what you can buy for just under $2,000. Inside the box is a 166MMX processor, 512Kbps of pipelined cache and 32MB of EDO RAM. The video subsystem consists of an S3 ViRGE 3D video card equipped with 2MB of EDO RAM. Performance on this card will not be on par with that of the higher-end models, but it will meet the needs of most consumers. Multimedia is delivered with the help of the new and already popular 24X CD-ROM drive from Panasonic and the well known Sound Blaster AWE32 from Creative Labs. Storage needs are met with a 2.1GB drive from Quantum. With the included 33.6Kbps Wisecom modem, you'll waste no time getting on line the minute you unpack the machine.

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# SDMS

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## Daiwa

***Suggested Retail Price.*** $1,999

***Reseller Price.*** $1,839

***Reseller Authorization:*** None

***Maintenance And Technical Relationship With Resellers:***
One-year warranty includes parts and labor
Toll-free tech support for resellers

***Volume Discounts:*** Yes

***Demo Unit Availability:*** No

***Editors' Notes:***
Daiwa computers are known for offering a lot of performance at a great price. The system we reviewed this month was no exception, featuring nothing but the best names in components and finishing with one of the highest scores on our BAPCo benchmark suite. Under the hood is a Pentium 166MMX processor, 512Kbps of pipelined secondary cache, and 32MB of EDO RAM.

For the best in graphics performance, the system makes use of a Matrox Millennium video card with 2MB of dual-ported WRAM onboard. Multimedia accessories include a Sound Blaster 32 sound card and a 24X CD-ROM from Panasonic. For the ultimate in performance and storage capacity, note get a 3.1GB hard drive from Western Digital. Also included in the system is a 33.6Kbps fax modem from Wisecom to get your customers on-line right out of the box.

## Comtronic A-Dpan

***Suggested Retail Price:*** $1,698

***Street Price:*** $1,528

***Reseller Price:*** $1,415

***Support For Resellers:***
Co-op advertising
Two-year warranty
Web site includes drivers

***Demo Unit Availability:*** Yes

***Comtronic's View Of The Market:***
"It will be the entry-level of desktops in the coming days. Since we are using 'tier one' computer components, we believe this system is the most reasonably priced and reliable desktops," says marketing manager, Elton Lam.

***Editors' Notes:***
This A-Open system from Comtronic features the requested 166MMX processor, 512Kbps of pipelined cache and 32MB of EDO RAM. The 430VX chipset from Intel is situated on a motherboard from Acer, model AP5VM. Graphics are delivered with the aid of an S3 ViRGE video card with 2MB of EDO RAM onboard. The hard drive in this unit is a low-cost JTS 2GB model, ideal for anyone looking to save a few dollars when performance isn't the number one priority. Rounding out the system are a slew of Acer components such as a 16X CD-ROM, a 33.6Kbps fax modem and an Acer FX-3D sound card. Performance on this machine was just slightly below the overall average, but the system's price more than makes up for that.

## Packard Bell CAN PLT 2015

***Suggested Retail Price:*** $2,999 (including 15-inch monitor)

***Reseller Authorization:*** Yes

***Support For Resellers:***
Co-op advertising
Reseller referrals
One-year warranty includes parts and labor
Web site includes technical information and drivers

***Editors' Notes:***
Packard Bell's latest creation in desktop systems is the Platinum 2015. The system consists of a 166MMX processor, 256Kbps of pipelined cache and 32MB of EDO RAM. For graphics, the PLT 2015 relies on an S3 ViRGE video card with 2MB of EDO RAM. Also included with this system is a 15-inch monitor, a Packard Bell model 2020. Storage comes in the form of a 2.1GB hard drive from Seagate, and a 16X CD-ROM from Goldstar. A differentiating features of this system is the vast amount of software included.

## Samtack Pina

***Suggested Retail Price:*** $2,059

***Editors' Notes:***
Computers from Samtack are well known under the Pine brand name. The system we received this month was a well-rounded unit that offers fair performance at a reasonable price. Included in the system is the 166MMX processor, 512Kbps of secondary pipelined cache, 32MB of EDO RAM, a Trident 9685 video card with 1MB of DRAM onboard, a 16-bit sound card from Yamaha, a Goldstar 16X CD-ROM drive, a 2.6GB drive from Fujitsu and an Acer 33.6 Kbps voice/fax modem. The machine managed to achieve a score of 165 on our BAPCo suite, slightly less than average due greatly in part to the slower Trident video card. Overall, this machine would make a great starter system for any home, especially considering its low price tag.

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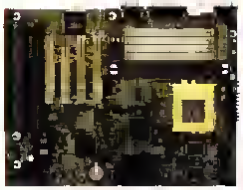
## 586ITX

Intel 430TX ATX System Board



- Supports ACPI and OS Directed Power Managment
- Ultra DMA/33-data transfer rate up to 33MB/sec
- Equipped with a switching power module that supports 2 8V, 2 9V, 3 2V, 3 3V and 3 5V
- Two DIMM sockets using SDRAM for enhanced performance
- Modem ring-on
- ATX power connector

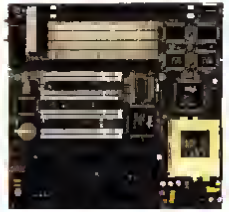
## 586ITB

Intel 430TX BAT System Board

- Supports ACPI and OS Directed Power Managment
- Ultra DMA/33-data transfer rate up to 33MB/sec
- Equipped with a switching power module that ranges from 2.5V to 3 5V, 0 1V per step
- Two DIMM sockets using SDRAM for enhanced performance
- Modem ring-on
- ATX and AT power connectors (use ATX power supply for the ACPI function)

## 586IPVG

Intel 430VX BAT System Board



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## Mynix Mycomp

***Suggested Retail Price*** $2,385

***Street Price*** $2,295

***Reseller price*** $2,095

***Reseller Authorization*** Yes

***Support For Resellers.***
Co-op advertising
Marketing funds
Three-year warranty includes parts and labor
Toll-free tech support
Dedicated technical BBS

***Demo Unit Availability And Restrictions:***
Demo units are available to volume resellers only

***Mynix's View Of The Market***
With the Intel 430TX chipset and the Ultra-DMA/33 hard disk, this system is top of the line in the Pentium Class system, says the company.

***Editors' Notes:***
Not only did the system make it through the entire benchmark suite, but it did it flawlessly on the first try with no system hangs or glitches whatsoever. Not only that, but it managed to achieve the highest score of all the systems in this month's roundup, finishing with an overall score of 198. The system consists of a 166MMX processor, 512Kbps of pipelined cache, 32MB of EDO RAM, and the new 430TX chipset from Intel. For lightning fast graphics, the system uses a Matrox Mystique video card with 2MB of high-speed SGRAM onboard. Storage space is anything but scarce with this 4.3GB Quantum Fireball ST. Rounding out the system is a BTC 12X CD-ROM drive and an ESS 1868 sound card. If you're looking for the ultimate MMX system, get this Mycomp Vantage.

## Ultinet

***Suggested Retail Price*** $2,198

***Street Price:*** $1,998

***Reseller Price*** $1,895

***Reseller Authorization:***
Ultinet requires a completed reseller application with a provincial tax permit.

***Support For Resellers.***
Reseller referrals
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Toll-free tech support

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***Demo Unit Availability And Restrictions:***
Demo units must be paid for in advance, with a refund issued on return of the product.

***Ultinet's View Of The Market:***
The company says this system will become the de facto entry level product by the end of the year. This is a high powered all purpose computer at an entry level price.

***Editors' Notes:***
Ultinet has once again managed to build a system that packs a punch when it comes to raw performance and provide high quality components at the same time while maintaining an aggressively priced machine. This month's system is powered by a 166MMX processor, 512Kbps of Level-2 cache and 32MB of EDO RAM, all on a 430HX-based ASUS motherboard. The use of a Matrox Millennium video card with 4MB of WRAM onboard and a 3.2GB Quantum Fireball hard drive helped this system to achieve a high score of 187 on our benchmark suite. Also found in the mini-tower of this machine is a high speed 24X CD-ROM from Panasonic, a Sound Blaster 16 sound card from Creative Labs and a USR Sportster 33.6 Kbps modem.

## Editors' Choice

July 97

***Performance***
This month's top performing system was the Mycomp machine from Mynix Technology. The machine has everything your customers could ask for, from a great video card to a super hard drive to an excellent price with a three year parts-and-labor warranty. For top performance on an MMX machine, Mycomp has it all.

***Price/Performance***
Without a doubt, the award for best price/performance this month goes to the A-Open system from Comtronic. For just over $1,400 your customers get a complete 166 MHz MMX system with a 2.0 GB hard drive, a 16x CD-ROM, and a 33.6Kbps modem. If you're looking to sell a starter system that offers full multimedia capabilities but doesn't want to break the bank, this is the system for you.

***Overall***
The PowerMate P2166M from NEC impressed us very much with its combination of quality components, good performance and attractive price tag. It features an excellent hard drive — a 3.1GB Western Digital, a zippy 16X Goldstar CD-ROM and an ATI 3D Rage II video card with 2MB of SGRAM onboard. If a name brand computer is important, and you want a good overall machine with a competitive price and warranty, the PowerMate P2166M is an ideal candidate. CCW

*Steve Halinda, Tim Bingham-Wallis and Jazz Bhoot are CCW's Lab Test Editors. The can be reached at (416) 535-8404*

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# Is Thinner Always Better?

## *What are the advantages of flat panel displays over CRTs? What are the differences between LCD offerings?*

*by Steve Halinda*

The world of personal computing over the last few years has been witness to a multitude of new products, many of which have promised to revolutionize the way we work with our computers. Some have undoubtedly delivered on their promises, while others are nothing more than a faint memory. The history of technological advancement has made it evidently clear that the measure of our progress forward is often directly related to our miniaturization abilities. It's true — the world around us is shrinking at a phenomenal rate, and we can't help but sit back and marvel in awe.

This month, our *Lab Test* includes a brief report on the rapidly developing world of flat panel displays. Initially, these devices were used primarily in laptop computers, but are available today in standalone formats, ready to act as replacements for your desktop monitor. Or are they?

Flat panel displays have several advantages and disadvantages when compared to traditional CRT (cathode ray tube) desktop monitors. First, we have the very obvious issue of desktop space. With a flat panel display, you only need about one quarter of the overall space that you would otherwise need with a typical desktop monitor. These units are quite thin, measuring anywhere from 1.25 to 2.5 inches for the actual panel, and an extra couple of inches for the base at the bottom of the unit. If desktop real estate is of great importance to you, one of these displays can be nothing short of bliss. Aside from being thin, they are very light, weighing in at approximately 10 to 12 pounds (less without the base). Compare that to a typical 17-inch monitor which weighs over four or five times that amount, and you quickly begin to realize that portability is a key advantage with these units. Should you ever need to move them from one place to another, you can easily do so without worrying about it being too heavy to handle. Quite often, the bases on most displays can be detached, making them ideal candidates for mounting on walls.

Inside a conventional monitor is an electron gun, a mask and a glass screen which is coated on its inside with color phosphors made up of red, green and blue. When the electron gun fires the electron beams, the mask is used to shield and direct the beams into the individual phosphors. When the beam hits these phosphors, they glow, and in return we see the pixels light up on the monitor. The colors we see are determined by which of the phosphors are hit with the electron beam. Flat panel displays, on the other hand, do not have an electron gun. In the simplest of terms, think of the flat panel display as a large grid made up of millions of tiny transistors. Each individual pixel on the screen is controlled by three transistors, one for each primary color. This technology offers several benefits over the CRT design. First and foremost is the radiation which is encountered in CRT displays. Since there is no electron gun present and no high voltage sources required, flat panel displays are ideal for situations where radiation emissions and static are crucial such as in hospitals and laboratories. In CRT monitors, high voltage levels in the range of 15 to 30 kV (thousand volts) are present inside the unit. Flat panel displays consume significantly less power than any desktop monitor. The average consumption for these units seems to be in the realm of 30 to 35 watts (W), as opposed to an average 17-inch monitor which normally consumes up to 120W.

The biggest drawback to a flat panel display is the price tag associated with it. The models we reviewed were each well over $2,000 for a 14-inch design. Those with larger viewable areas in the 17-inch or higher category can cost upwards of $8,000. Fujitsu's Plasmavision 42 is a large-screen model with a viewable 42-inches measured diagonally. It has a list price of US$13,999. Aside from the high price tags, image quality is another issue with these flat panels. At the present time, with the technology currently found in these units, the picture quality is not as good as on CRT displays. Viewing the same image on both a CRT monitor and LCD panel will reveal variations in color and sharpness. While some of the newer models boast exceptionally bright and vivid displays, it will be quite some time yet before they replace desktop monitors. CCW

*Steve Halinda is a Lab Test Editor for Canadian Computer Wholesaler. He can be reached at steve@tcpon.com.*

### Models Reviewed:

#### Hewlett-Packard

HP's first attempt at a flat-panel display comes in the form of this 14-inch model. With a diagonal measurement larger than most 15 inch monitors, this LCD panel can display resolutions up to 1,024 by 768. The on-screen controls are easy to work with and offer a variety of different configuration options. Text was sharp and clear, and graphics were displayed in bright colors. The unit has a suggested retail price of $3,726 and comes with a standard one-year on-site parts and labor warranty.

*(Hewlett Packard Canada, 1 800 387 3867, http://www.hp.com)*

#### NEC MultiSync LCD400

The MultiSync LCD400 from NEC is an excellent example of superb engineering and design combined with features not found on competing products. Of the most notable features on this model is what NEC has termed "FullScan" capability. This allows you to use any resolution supported by the LCD400 in full screen mode without a black border around the screen. What this means is that if you were running in 1,024 by 768 in a Windows environment and you opened up a DOS box you would be able to maximize that DOS box with the ALT Enter combination and have it occupy the entire screen. This is a feature not available on the other two models we tested. The LCD400 supports resolutions up to 1,024 by 768 at 75Hz vertical refresh rates. It has an estimated street price of $3,699 and is covered by a three-year limited warranty. NEC will begin shipping the LCD400 in August of this year.

*(NEC Technologies Canada, 1 800 366-0476, http://www.nec.com)*

#### Philips Brilliance 4500AX

The 4500AX from Philips is a 14.5 inch viewable panel, capable of resolutions up to 1,024 by 768 with a flicker free refresh rate of 75Hz. It has a dot pitch of 0.288 mm, common on most CRT monitors. The unit itself without the base weighs only 7.04 pounds, making it easy to transport at any time. The Brilliance 4500AX goes one step beyond the other two models we looked at by integrating speakers into the LCD panel.

*(Philips Electronics Canada, (416) 292 5161, http://www.philips.com)*

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Feature

# Look Ma, No Wires!

by Paul Wemberg

**Many wireless computing technologies have been slow to gain widespread acceptance, but indications are the market-place is picking up.**

Where are the fabled scores of mobile professionals who were supposed to roam around the globe with their laptops, cellular telephone and/or personal digital assistants (PDAs) — faxing, E-mailing and sharing data with the office?

"For five years we have been promised these solutions but they have never really materialized," says Ian Gillott, director for wireless and broadband networking at the Austin, Tex.-based office of International Data Corp. Gillott blames the lack of greater presence for wireless computing on a number of factors: varying standards by different cellular vendors, services that may be available in Austin but not in Montreal; premium pricing, and, consumer resistance to lugging around all that hardware on trips.

## Wireless E-mail

The problems lie not with the cellular phones but with the wireless modems which are supposed to access E-mail, says Gillott. "It is hard to do. I have to get my IT department involved. Then it isn't plug-and-play but plug-and-pray."

The industry continues to produce interesting products like the Nokia 9000, a PCS digital cellular telephone/PDA available from the Finlund-based Nokia. It contains a full slate keyboard and screen. But the cost will be in the thousands once it is available in Canada, says Chander Dhawan, president of the Toronto-based Dolnet Mobile Computing and author of "*Mobile Computing: A Systems Integrator's Handbook*." "None of these devices have the final form factor which consumers will accept. They are too big or bulky. These problems are not insurmountable. How do you pack so much functionality at a reasonable cost into a small space?"

> "People are seeing (wireless) as a viable means of putting in real-time tracking in the warehouse, as opposed to using paper."
> — *Jeff Lem*

Gillott is skeptical of efforts to marry the telephone and the computer, when the two have separate, distinct functions. "I carry a phone because I want to talk to people and I carry a laptop because I want to work. I don't carry anything else [while on the road]."

Wireless E-mail is now available on cellular phones and pagers. The Interactive Pager developed by the Waterloo, Ont.-based, Research and Motion, for instance, allows for E-mail messages to be sent or received at a remote location outside such as an airport. In addition, connection can be established with the office via the Internet for product information.

Cellular phones and pagers function well if they serve as "notifying devices," says Gillott, providing abbreviated information like stock quotations, the weather and short messages from the office. Service and repair are two vertical applications, but these devices would never replace a laptop. "I am not going to read a five- or 10-page E-mail on a small screen," he adds.

## Wireless LANs

Wireless local area networks however, are starting to make inroads into the warehouse and distribution business where small and rugged data collection or pen-based devices

linked to servers in the office can be used to track thousands of merchandise in shipping and receiving.

It is mainly the large distributors which are adopting wireless LANs because of the financial payback from a more efficient just-in-delivery system, as well as the possibility of eliminating unnecessary labor costs, according to Jeff Lem, systems specialist for Q Data Inc. The Markham, Ont.-based systems integrator designs the software interface that links handheld devices manufactured by Norand Data Systems Ltd. with one of the available warehouse/distribution packages on the market. Clients include The Liquor Control Board of Ontario, but somewhat ironically, not many PC distributors, which have been slow to introduce wireless LANs into their operations, he says.

"Wireless has been around since the Second World War, but it is starting to be embraced and accepted in the workplace because of the spread of cellular phones. People are seeing it as a viable means of putting in real-time tracking in the warehouse, as opposed to using paper."

In many cases, Q Data's integrated solutions are communicating with legacy mainframe systems in the client's head office, says Lem. His company will also provide wireless wide area networking solutions which rely on satellite technology. Typically, a company will only go wide area if they want to link with sales or delivery people over a wide area."

But these are still very specialized vertical markets. So far, there is not enough market demand for wireless LANs within the corporate and government accounts to warrant the attention of network-oriented VARs like Tom Atluru, general manager for Torontel Computers and Communications in Toronto. "I have had home users even inquire about cellular modems. But most of them start looking at the costs and figure it is not worth it. Very few people go beyond an alphanumeric pager."

But attitudes among end users are bound to change once the realization sets in that wireless technology can help fill existing data transmission gaps within organizations, says John Montgomery, responsible for sales and marketing of mobile wireless systems at the Markham, Ont.-based IBM Canada Ltd. "There is an opportunity for the properly skilled VAR to offer some value and services in the design, configuration and installation

# Will Digital PCS Mean More Business For You?

*by Paul Lima*

As Canada's wireless communication industry goes digital, greater opportunities for computer resellers are emerging. Today, 2.8 million Canadians (which is 12 per cent penetration) use cellular phones. By 2001, 30 per cent of Canadians will use wireless communication devices and Canadian mobile telephony revenue will exceed $4.5 billion annually, according to research group The Yankee Group, in Ottawa.

Corporate downsizing, combined with the growth in home-based businesses, means busy people with limited support staff are using wireless devices when on the road to stay in touch with the office, clients and suppliers. In addition, individuals concerned about safety while travelling have also armed themselves with cellular phones. "Wireless products and services are revolutionizing the telecommunications industry," says Roger Poirier, president, Canadian Wireless Telecommunications Association. "The mobile office is a reality. And through PCS (personal communication services), individuals will soon have one telephone number for all their communications needs — from voice and messaging services to fax and data transmission — anywhere, anytime."

**Cellular Versus PCS**

In Canada, there is one national cellular carrier — Cantel AT&T (formerly Rogers Cantel) — and a series of provincial cellular companies that have formed a national consortium under the Mobility Canada umbrella. Bell Mobility, serving Ontario and Quebec, is the largest Mobility Canada member.

No matter which network you join, you can place calls to and receive calls from wired (land-line) phones and other wireless networks.

Analog cellular from Bell Mobility and Cantel operate on the 800MHz cellular band (radio frequency). Analog networks have limited capacity and cellular users in major urban areas frequently have difficulty connecting to the network during peak periods. To alleviate network congestion and to encourage investment in new technology, Industry Canada awarded PCS licences to Clearnet Communications Inc. and Microcell Telecommunications Inc., as well as to Bell Mobility and Cantel.

Digital, from the ground up, PCS networks operate at the 1.9GHz radio frequency. Digital PCS provide users with improved voice transmission services such as caller identification (visual call waiting and calling line ID), short messaging services (the ability to send and receive pager-like messages), enhanced caller privacy and reduced fraud.

**Then There's Mike**

The growth in digital wireless communications goes well beyond voice and short message services. "Mobile radio is growing rapidly, driven by technological innovation," says Poirier. He cites the launch of Mike from Clearnet Communications as an example.

Operating in the Windsor to Quebec City corridor, Mike is Canada's first enhanced specialized mobile radio service (ESMR). Mike integrates a wireless phone, pager, mobile radio and other business applications in one handset. Mike will soon be available in Vancouver and Canadian users can operate Mike handsets in over 200 American cities.

**Mike Does Data**

Of interest to computer resellers is the fact that Mike handles data. And it does it without the addition of expensive PC Card modems since the modem functions required for data communications are integrated into the all digital Mike iDEN network. To send and receive data or faxes from a portable computer, all one has to do is connect a data-ready Mike Motorola handsets to the computer's standard RS-232 communications port.

Armed with notebooks or palmtop computers and data-ready Mike handsets, sales representatives, service technicians and other road warriors will be able to send and receive faxes, transfer data files and E-mail between portable computers and corporate networks, intranets, CompuServe, America Online and the Internet at 9,600 bits per second initially.

These data communication services, combined with Mike's voice, paging/messaging and two-way group or private radio services, mean Mike customers receive more wireless services than cellular customers — using less hardware. Modem functions integrated into the network mean Mike data users experience quicker call set up connections, faster data transmission speeds and more reliable data transmission compared to cellular data users.

**VAR Opportunity**

"The simplicity of the system is going to drive sales," says Greg Jorritsma, manager, Clearnet VAR channel.

He also says Clearnet is actively seeking computer resellers, including VARs, system integrators and software developers, to create value-added products and services that will run on the Mike network.

"Using the Mike network VARs can now enhance the scope of report access solutions horizontal and vertical markets," says Jorritsma.

All products and service developed by third parties to run on the Mike network will be tested, approved and supported by Clearnet. Clearnet is "not so much building a VAR program as it is building a solutions funnel" that will benefit the end users, resellers and Clearnet, says Jorritsma.

So if you thought wireless meant people talking to each other over a cellular phone, think again. Digital wireless may mean enhanced sales and expanded margins for computer resellers. CW

*Paul Lima (bko@idirect.com) is a freelance writer specializing in high tech and communications issues.*

of a wireless LAN in their existing customer environments, where they have already provided the network, server and a lot of PCs."

Wireless LANs are not about to replace the existing cabled infrastructure within enterprise networks but it could cut out some of it, reducing costs and simplifying internal planning in the process, he says. Viable options include improved building-to-building communication between two LAN segments a few miles apart and the establishment of links with an office in an older historical building or a harsh environment such as an industrial site.

"There are occasions where there is either a right-of-way, which can't be physically cabled or it is too cost-prohibitive," he suggests.

Also, enterprise networks were designed for employees to share data at their desktop PCs. But plenty of anecdotal evidence indicates that many people at work spend much of their time away from their desks in meeting rooms, which often lack Ethernet or Token Ring ports that would facilitate connection to the network server. A wireless LAN solution, says Montgomery, "provides employees access to enterprise data when and where it is required, so as to provide that level of mobility within an enterprise."

Meanwhile, PDAs and handhelds might have a new lease on life with wireless support.

To enter the wireless market, VARs are going to have to expand their understanding of telecommunications, says Dhawan. Already, the cellular telephone vendors are starting to establish partnerships with application providers in the PC reseller community. "VARs will have more opportunity down the road, but it is not going to come in a big rush like the Internet. It is going to take time, it is going to be slow and steady."

*Paul Weinberg is a Toronto-based journalist, specializing in high-technology reporting and business. He can be reached at pweinbg@interlog.com.*


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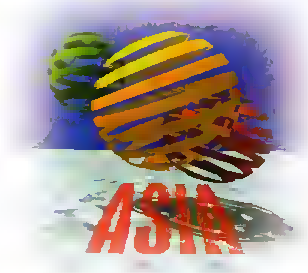


# Taiwan's Computex spawns slew of products

*by Douglas Alder*

Taiwan is well known for such products as motherboards, notebooks, cases, power supplies, keyboards, scanners and countless other computer products. Here is a brief sampling of some of the technologies that were on display at the recent Computex computer show in Taipei.

## Chips

I saw a new chip called the C6 from IDT, which aims to challenge Intel on the low end of the Pentium scale, including MMX technology. The company's goal is to have a chip out within a couple of months that will be 60 to 70 per cent of Intel's pricing. The California company was in Taiwan promoting their chip to the motherboard manufacturers.

*(http://www.centtech.com)*

## The Land Of The Scanners

Acer, Umax, Optrox, Mustek, Scantek and Plustek all had new units. The difference between each unit would need a full fledged lab test to determine. A couple of products of note were a very pleasingly designed, including the Paperport-clone, sheet fed scanner from Acer's Vuego division. I got a glimpse of Plustek's new A3 sized scanner under wraps in their booth.

*(http://www.uptech.com.tw/scanner, Optrox — 886-3-572-7979, Mustek — http://www.mustek.com.tw)*

## Notebook Computers

Bigger and smaller were the two trends I noted. Mitac was showing a humongous 14-inch screen notebook. These units are starting to look like desktops instead of portables. Serious weight and power requirements are attached to this type of display.

*(http://www.mitac.com.tw)*

Around the show were two or three units of the new Toshiba Libretto sub-sub notebook. The idea of these computers is to pack full-sized notebook features into something just a tad larger than a Windows CE HPC. The Toshiba is an attractive little unit, but I found the pointing device and small keyboard made it almost unusable for my sized hands. I understand the unit in North America will have a larger keyboard. I was grateful for the almost full-sized keyboard on my Newton 2000.

I got a glimpse of a new machine from Mitsubishi called the Amity CN. This sub-notebook is scheduled to appear in August in North America. The keyboard on this unit is far more attractive than the Toshiba Libretto. It is a little bit larger, but the fact that is it was useable made the extra weight worthwhile.

*(Toshiba — www.toshiba.com; Mitsubishi — www.mitsubishi.com)*

A small company named Dotop, had a four-port Ethernet hub on a PCI board. By eliminating a power supply and box, they can shave the price down to $US49 at retail. This compares with $100 to $139 current pricing. The owner claims to have a patent pending on the idea.

*(Dotop Company Ltd. — 886 2-218-2123, E-mail: info!dotop@domedia.com.tw)*

## Input Devices

I must have seen a dozen small manufacturers of little handwriting recognition pads. These little surfaces are about two by three inches and allow the user to input drawings or signatures into your computer. Using the devices launches a pseudo clipboard program which stores input until the user selects the program into which they want to paste. Using this technique, they can integrate well with any program that accepts graphics, including word processors.

*(Gotop Information — http://www.gotop.com, CRE Technology Corp — http://www.cre.com.tw)*

## Palmtops

I wandered past Motorola's booth and they had an interesting display of the Dragonball chip. This is basically a 68000 chip, the one used in the original Mac Plus, scaled down to minimize power consumption. USR is currently using this chip in its wildly successful PalmPilot handheld organizer. Motorola has put together a tool-kit called PPSM, to allow other vendors to build competing products. There were two Taiwanese companies showing off a variety of Pilot clone products. Note, these products will probably sell at substantially lower prices than the USR unit, and will not be software-compatible with the Pilot, but will probably do many of the same things.

*(Umax subsidiary Eten Information Systems—02-296-2900 E-mail:sasieh@eten.com.tw, Palmax Technology — 04 321-5550, E-mail: pahnax@tptn.seed.net.tw, Motorola — http://www.motorola.com)*

Another hopeful sign for PDA users is the emergence of higher and higher density Flash RAM cards.

I for one was pleased to see 64MB cards available and 128MB on the way soon, though they are still prohibitively expensive.

## Web TV Boxes

Sampo had a box which claimed to run the DIBA operating system. Unfortunately, the company didn't plug the thing in for demos. This highly acclaimed, but slow to market product is a competitor to Microsoft's WebTV.

A unit that show visitors could actually try was from Proton Electronic Industrial Ltd. (886-2-953-5838-9). It seemed a little rough around the edges and there was no where to just type in a URL. You had to return to a home page to do this, rather than having a space always available on screen for this function. The unit is supposed to be available some time this month for less than US$300.

*(http://www.sampo.com.tw)*

## Macintosh Stuff

Not much was on display for avid Mac fans. Umax, of course, was there with some new machines, but more emphasis was on a new line up of high-end graphics PCs. Umax is making. This company is definitely hedging its bets against any failure in the Mac market.

Tatung, which also has a licence to do Macintoshes has a similar approach. The company did have a couple of samples of planned CHRP Mac compatibles in its booth, but the people I spoke with seemed unclear on the CHRP strategy, now that Windows NT for the Power PC chip has been scuttled.

*(Tatung Canada — (604) 736-2198, http://www.tatung.com/tw)*

There were a couple of small keyboard vendors offering ergonomic Mac keyboards. This will be a relief to those who have tried the keyboard from Adesso and found it sub-standard.

*(Strong Man Enterprises — 886-2-276-5390-2, Ezkey Corp — http://www.ezkey.com.tw)*

## Digital Cameras

Long the stronghold of Japanese camera manufacturers, digital cameras are just now starting to show up from Taiwanese companies. I saw units from Mustek and Umax. The Umax PhotoRun camera was the most unique. It was very small and thin with a projected retail price of US$250. The tiny size is achieved by using 2MB compact RAM cards for storage.

*(http://www.umax.com)*

*Douglas Alder is Publisher of Canadian Computer Wholesaler. He can be reached at publisher@tcp.ca*

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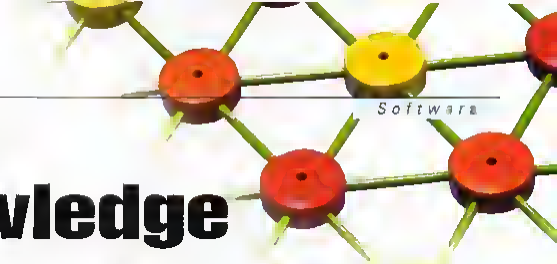

# Intranet Knowledge Void Waiting To Be Filled By VARs

*by Dan McLean*

The next wave of IT is washing over the entire industry and in its wake is appearing a new model of computing that brings users closer to that long strived for concept ease of use. If you haven't at least heard of Intranets, then you've probably been on a different planet for the past year.

Intranets are the hottest new model of corporate network computing that takes the user-friendly best of what the Internet has to offer and applies it to the often stodgy cryptic environments of business.

For the uninitiated, intranets are networked environments created on corporate LANs and enterprises utilizing Internet-type tools and technologies. Intranets are in fact, private networks that incorporate the protocols, processes and standards found on the public Internet and are, among other things, designed to:

- provide the ability to quickly deliver information to corporate users,
- provide users with networking technology that is easy to learn and use,
- offer the ability to connect virtually unlimited numbers of users,
- be manageable and controllable, and,
- be inexpensive.

Like the Internet, TCP/IP is the primary protocol of intranets and provides the necessary interoperability base for all types of network operating systems. Browsers serve as the front-end client for accessing corporate information that, in an intranet, has the look of a World Wide Web-like environment.

Intranets boast the Web's ease of use. Corporate information can be strewn across Web site-type locations so that information access and communication between corporate users in an intranet boasts the simplicity of similar functions done on the Internet. In fact, it's just like surfing the Web.

Best of all, intranets are what the Internet is not — a secure and safe place for conducting business. Corporations can control who has access to what and the type of information which is available. Companies that currently operate some of the largest and most famous corporate intranets, include: Digital Equipment Corp., Ford Motor Co., Federal Express, Levi Strauss and George Weston Ltd.

> *"The move towards building intranets is the single largest shift in IT strategies that we believe has occurred in the last 20 years."*
> *— Rob Lloyd*

While mostly limited to document sharing applications now, many industry experts and analysts are convinced intranets are stepping stones to a complete revolution in the private network industry and a whole new generation of applications such as network management, and directory and file management.

"In Cisco's opinion, the move towards building intranets is the single largest shift in IT strategies that we believe has occurred in the last 20 years," said Rob Lloyd, general manager of Cisco Systems Canada Ltd. in Toronto. "As a provider of key elements of intranet plumbing and also of intranet security, this is a market that we are interested in accelerating as quickly as possible."

According to Lloyd, studies he has seen indicate the total expenditures on intranet technology deployment by businesses will exceed those for Internet technology deployment by a ratio of 4:1 in the next five years. "From Cisco's perspective in Canada, I'm seeing that start to be reflected in the nature of the business we're doing. Not at the 4:1 level," Lloyd said, "but we're seeing very rapid acceleration in the backbone switching adoption rates, the sizes of projects, the amount of security products and firewalls we're selling — and in the focus on scalable bandwidth and network management."

So is there an business opportunity for heads-up VARs in this goldmine that is network computing's next wave?

Absolutely.

It's in the area of services rather than products, where the real motherlode exists. Intranet skills are a prized commodity among an intranet-hungry business community that is starved for such expertise.

"Any VAR with a combination of skills in this area is well positioned to take advantage of an exploding market," Lloyd said. "I think their ability to grow would be infinite."

"It feels to me like the opportunity that was presented when the PC was first introduced in mainstream fashion back in the 1981 to '82 era. It feels to me — because I was in the VAR community at that time — like the same challenge: to fill the need for expertise in an area that customers simply didn't have at that point in time."

Owen Sagness, Windows NT Server product manager for Microsoft Canada Inc. in Mississauga, Ont., concurred. "For the resellers that move quickly, there's the opportunity to jump into a market that's expanding very quickly and to establish themselves as a leader within that market."

There are huge opportunities in the service space of provisioning and support for intranets, according to Jeff Vogan, business

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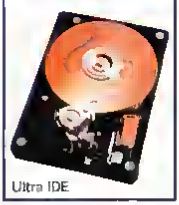

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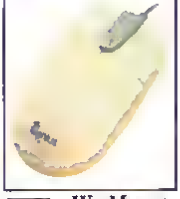

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development manager for Novell Canada Ltd in Markham, Ont. "There's less and less margin and less profitability in selling 'the box'," he explained. "The business model is shifting more towards services. I hear very often from resellers that, in many cases, they don't really care if they sell the hardware and software. What they prefer to do is get the consulting — help the customer understand their business requirements, then match the appropriate technologies, then implement and manage those technologies."

"That's certainly where the VAR partners can use their expertise and, quite frankly, that's where the margin is," he added.

Sagness noted that, during seminars he's conducted across Canada, he's discovered that only between five per cent and 10 per cent of people say they currently use intranets today. However, Sagness quickly added that nearly everyone he speaks to during those seminars say they are evaluating intranets. "The delta between those who are evaluating and those that have implemented is very large, which means there's a huge opportunity out there," he said.

In fact, most users are ready to proceed building corporate intranets right away, according to Vogan. Novell has conducted a series of road shows across Canada since last fall, talking to as many users as they can about intranet technology. Vogan said the level of interest has been impressive and many customers are beyond the point of trying to build a business case and are actually looking to make the move, he said.

"In my personal opinion we're getting beyond the point of [companies that ask], 'Do we need an intranet?' The answer is, 'Yes,'" he said.

Currently there is a huge shortage of knowledgeable professionals ready and able to serve a growing demand for intranet skills, according to Lloyd, Sagness and Vogan.

So vendors that provide intranet technology are doing as much as they can to help VARs gain the know-how they need to become the much needed consultants and implementors. Cisco and Microsoft are among those who are working frantically to get their partners up to speed.

The greatest barrier to the deployment of intranets is the availability of relevant technical know-how, Lloyd said, explaining that the skill sets for Web based technology are vastly different from those needed in mini and mainframe computing or traditional database environments.

*"For the resellers that move quickly, there's the opportunity to jump into a market that's expanding very quickly."*

*— Owen Sagness.*

Cisco offers a number of instructional opportunities through its VAR education programs — a chance to learn about how to provide the physical infrastructure required to support an intranet model of network traffic. The company is also actively involved in a program designed to encourage post-secondary educators to focus on Web-based technologies as part of their instruction, and to ultimately build a stronger base of up and coming industry professionals. Cisco recently sponsored a Master of Engineering in Internetworking program at Halifax's DalTech College.

Microsoft provides free Windows NT 4.0 upgrade training for all NT Server 3.x Microsoft Certified Professionals (MCPs). Microsoft pays the $200 cost of the training while its NT business partner Hewlett-Packard reimburses the $150 upgrade certification test.

"If you're an existing 3.x MCP and you'd like to upgrade to NT 4.0, we will reimburse you if you pass the test," Sagness explained. "The reason that this is important from an intranet perspective is because NT 4.0 contains all the base intranet server features from Microsoft, and most of the (certification) training focuses on the new intranet features in NT Server."

Novell goes a step further through initiatives that Vogan calls "demand generation." During two road show events since last fall, Novell representatives have spoken to approximately 16,000 customers, helping them understand what it takes to implement a private corporate intranet, what an intranet is and what it can do for them.

"We can't necessarily count on the reseller — without the support of vendors like Novell — to go out and generate the demand from our customers," Vogan said. "So it is important that Novell help generate the demand and get the customers interested, help them understand why they would want a particular technology and how it will affect their business.

"There have been numerous occasions where a Novell salesperson would go in with the reseller partner to meet with a customer and the first words from the customer were, 'I attended your show, I'm convinced, now tell me what I need.'"

Vogan characterized the intranet space as a huge and untapped opportunity and said there is currently more demand than there is ability to meet it. And it is the upper level of management where the most interested business professionals reside, he said. That means VARs who are looking to sell intranets as business tools should speak to the concept first before talking technical details.

"If the VAR understands how to clearly articulate the benefits (of intranets) to customers then all the technical bits and bytes fall out of that discussion," he said. "What I implore partners to do is not start the discussion with a customer as a technical presentation because what is driving (the deployment of intranets) are business needs. Start with understanding the business requirements and the bits and bytes fall from there."

*Dan McLean is a Toronto-based journalist who specializes in high technology reporting.*


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Column

# Motivating Your Employees For Increased Satisfaction And Profit

*By Douglas Gray*

Do you feel your employees are optimally motivated and productive? Is there a positive energy and synergy in the workplace? Do you have low employee turnover and high morale? If the answer is yes to all these questions, you probably don't need to read further. Whatever you are doing, you are doing right.

Managing employees is cited as being the biggest problem for small business owners. This is because employers very often don't know how to handle employees. Effectively managing employees is a skill acquired through training and practice. If you are hiring or managing staff, you should spend some time reading and taking courses on this topic. By applying some basic principles of respect and encouragement in the development of each staff member as an important individual, you will reap the rewards of loyal, trustworthy and dependable staff. The following sums up the course on human relations (source anonymous):

- The six most important words: *"I admit I made a mistake."*
- The five most important words: *"You did a good job."*
- The four most important words: *"What is your opinion?"*
- The third most important words: *"If you please."*
- The second most important words: *"Thank you."*
- The one most important word: *"We."*
- The least important word: *"I."*

## Hierarchy Of Needs

Many theorists believe that people have different need levels in their work environment. They progress from one stage to the next, although some people "plateau" or stay at a certain stage for a period of time before advancing on.

The basic or survival level is the starting point. In order to accept a position, a person needs to be assured that the wages offered are sufficient to meet his/her basic needs for survival (food, shelter).

A person's security needs relate to job, financial, and health security. These are most often addressed by an employer in a benefits package. Examples include: training and development, tuition fees for night courses, seniority systems, wage incentive plans, profit-sharing plans, insurance, pensions and medical/dental plans.

Having satisfied the basic and security needs, a person then seeks to satisfy social needs. Having an opportunity to learn new skills, to make suggestions, to interact with other staff, to attend staff meetings and be called upon for input are examples of how social needs may be met.

The self-esteem needs are satisfied by promotions, praise and recognition, added responsibility, and challenging work. At this final stage the employee is working independently, competently, productively, and has a sense of pride in performing at this level.

A manager's job is to recognize what stage the employee is at, and to assist and encourage them to progress along the ladder to their highest level of capability. Pushing too hard may sometimes discourage and frustrate staff who may have a different learning pace. Effective use of a variety of motivation techniques will foster personal development for the employee, and in turn increase productivity and profits.

## Leadership Style

A leader is one who is in control, takes charge of a situation, and is decisive. A good leader or manager is fair, firm, and consistent, as well as flexible. Being flexible doesn't mean that you have to change your personality. You can be firm and still be friendly; you can be decisive and still be polite. You can give someone more freedom without giving away the company. The better you are at knowing how to treat your employees, the more effective you will be as a manager.

## Motivation Techniques

You can reduce unwanted employee turnover and the high cost of recruiting, hiring, and training new staff by shifting these costs to keeping and developing experienced ones. For example, you can motivate an employee to increase productivity by providing opportunities for career development. At the same time you have improved the worker's skills and shown recognition of the worker's value and aspirations. Also, delegation becomes a motivation technique when an employee is assigned challenging task, and given the authority to see it through completion. Shared decision-making is a good management practice, whereby employees and management suggest ways to solve a problem, and a consensus decision is made by the group on which action to take.

## Incentives

There are numerous incentives which an employer may use to satisfy a person's security needs. Perhaps the most obvious incentive for employees is a pay increase.

While it is difficult to relate fringe benefits to employee productivity and job satisfaction, an attractive benefit package will contribute to the image that your organization is a good place to work. This image will attract prospective employees, reduce employee turnover, and favourably influence suppliers and customers. CCW

*Douglas Gray, LL.B., is a Vancouver-based lawyer by training, speaker, columnist and author of 15 best-selling business books, plus a real estate software program. His books include: The Complete Canadian Small Business Guide and Home Inc.; The Canadian Home-Based Business Guide (both published by McGraw-Hill Ryerson); and Start and Run a Profitable Consulting Business and Marketing Your Product (both published by Self-Counsel Press).*

# Capitalizing On Co-op

*Is your company taking full advantage of the marketing funds and programs that are available to you?*

*by David Rosen*

Co-operative advertising funds? At first glance it seems an exceptionally good deal. "You mean they'll pay me to advertise?"

Well, sort of. Introduced over a decade ago, co-operative advertising funds were originally designed to improve sales, establish brand recognition and create interest in the marketplace. These funds are usually offered by large manufacturers to resellers who must use the money toward advertising of the manufacturers' products. Sounds good, right? But just as quickly as they were discovered by margin-hungry resellers, they were dismissed because of all the limitations and procedural hoop-jumping required by the manufacturers. Apart from the occasional advertisement in their local *Yellow Pages* directory, many resellers found that obtaining the money from their funds simply wasn't worth the trouble of dealing with manufacturer's red tape and the convoluted claim forms. Besides the fact that you usually had to spend money to use the co-op funds made these programs even less popular.

A lot has changed over the past decade. Many manufacturers have listened to resellers, reworking their co-op programs to be more friendly and usable.

Manufacturers see co-op programs as a competitive advantage. In fact, some declined to be interviewed for this article, stating they didn't want to give away competitive information.

John Trisic, Hewlett-Packard (Canada) Ltd.'s marketing manager for its commercial business organization, explains the company's co-operative marketing has changed to reflect the market. "HP's co-op program is designed to reward and incent specific reseller performance," he says, adding that "it has moved away from the fixed percentage co-op model to one that adds long-term value — both for the reseller and Hewlett-Packard."

John Trisic: HP rewards and incents performance

HP's marketing and technical support, including the company's *In-touch* reseller newsletter, dedicated reseller Web sites, lead generation and training all cost money and are counted as part of HP's co-operative program. Trisic says that HP's top resellers have their own individual company rep whose pay, in part, comes from and as a result of the reseller's activities.

But co-op wouldn't be co-op unless there was a system of direct financial benefit to incent resellers. The company's market development dollars are parceled out through its distributors in a flexible programs. For example, minimum quarterly sales of $100,000 generate 0.5 per cent into the resellers' accounts, and this percentage can grow to 0.75 per cent, depending on sales. And Trisic adds, understanding the program can only work to the resellers' benefit.

With 10 per cent of the global market, Compaq is the world's leading PC maker. John Challinor, Compaq Canada's corporate and public relations manager, says the company's Market Development Fund (MDF) is one of the reasons behind this success.

"Every reseller has an MDF account that they can draw from to support their own activities," says Challinor. "Different resellers use the MDF in different ways but usually it's for co-op advertising, staff training and relationship-building activities." Compaq's program covers things such as *Yellow Pages* advertising, business premiums such as speaker gifts, business development activities and other pre-approved activities. But just because an activity isn't on its pre-approved list, doesn't mean that Compaq won't fund it. "We'd listen to just about any idea that will make business sense," Challinor adds.

Even IBM, legendary for paperwork, is starting to see the light and making its programs less burdensome. IBM's Focus Program is a series of marketing components available for resellers based on soft dollar accruals. "The more a reseller sells, the more soft dollars there are in their account," explains Susan Taylor, spokesperson for IBM Canada Ltd. But despite the flexibility of the Focus Program, Taylor claims the paperwork is minimal. "It's just a one-page form that needs to be completed."

Pay attention to your co-op opportunities. It may deliver long-term benefits to your bottom line. CCW

*David Rosen is a Toronto-based journalist who specializes in high-technology reporting. He can be reached at DavidYYZ@aol.com.*

### Get Co-op Working For You

Although manufacturers have each designed different co-op systems, the goal of all programs is the same: to focus you, the reseller, on their products and solutions.

**Read the fine print.**
Manufacturers want resellers to use the dollars they have, but they say many resellers miss out because they don't even try to understand the programs.

**Keep a tickler file of rollout dates.**
Most co-op funds are time-sensitive, meaning that all money in the funds is not used by a certain date it rolls out of the account — forever.

**Support on-going activities.**
Co-op dollars be used for one-time efforts as well as for reducing expenses relating to on-going activities such as staff training or even business trips.

**Keep current with the programs.**
Ask around every so often so you don't miss anything important.

**Get creative!**
All the manufacturers interviewed for this article suggest that it's up to reseller to come up with some interesting ways to spend their co-op dollars. After all, it's your money.

# Bolster Your High-Tech Image

*Value-added resellers who are looking to get out the message about your company's particular products and services should be aware of some key marketing differentiators to this industry.*

*By David Eisenstadt*

The fundamentals of marketing communications are much the same for high-technology companies as they are for any other business enterprise.

But there are several special situations, where you have a bigger edge or a greater need than providers of more traditional products and services. You just have to know how to take advantage of your uniqueness. Here are 10 generalities about high-technology business operations that should be considered in your marketing communications strategy. Most of them will apply to your company to a greater or lesser extent.

### You're the right kind of people.

High-tech firms are among the most desirable corporate citizens: nonpolluting, generally quiet operations; employers of highly skilled people (at accordingly higher wages), offering the promise of spectacular growth potential. The public is generally better disposed to give you a positive first hearing than, say, an environmentally risky electroplating firm or the assembler that is notorious for low wages.

### Product differentiation can be made more dramatic.

Provided you can explain clearly and without confusing jargon how your product or service can make a real difference to your customers, you'll have a legitimate claim to use words like new in setting it apart as something that gets the job done better than it could have been done without you.

You need to get that uncluttered message across anyway: no matter how technically literate your immediate prospects must be, few high-tech vendors can make a sale without convincing the non-technical decision-makers who want to know how you can improve the bottom line.

### Your target publics are generally easy to identify.

Most consumer products' manufacturers devote considerable marketing effort to identifying the right market positioning. High-tech companies generally sell very specific solutions to very specific problems. While others struggle to sell the sizzle, you can concentrate to a much greater degree on selling the steak — and you know just who the likely prospects are.

### The public is hungry for high-tech market intelligence.

You'll find a much more receptive public audience when you promote your robotics firm if you supply them with intelligent generic information on how fast the robotics industry is growing. A similar market positioning is possible for almost any high-tech message: you can sell your solution better if you show the dimensions of the problem. Help potential customers them understand what's going on in database management, for example, and you'll be more credible as an innovator with your own database product.

### You can humanize your technical know-how.

High-tech innovators are often young, aggressive and brilliant — just the people the news media likes to see as heroes of tomorrow. A knowledgeable communicator should be able to identify human interest angles in the struggle you and your company have had to get to the forefront of a very tough market-place.

### Public perceptions can be critical to potential investors.

Where many traditional industries can point to fixed assets and retained earnings to attract investors, high-tech firms often have very little in plant and equipment to point to. Lenders, corporate buyers and investors like to see recognition within your industry that you're intellectually equipped to survive the pace of technological change and industry shake outs.

### You have to draw your resources from a very small talent pool.

Virtually every high-tech business faces a never-ending struggle to attract staff with skills critical to its continued operation. A higher public profile will go a long way to convincing the people you need that your company is where today's action is. That's often the deciding factor, ahead of salary and benefits packages that are generous enough everywhere.

### Your customers want continuing relationships.

Buyers of high-technology generally want to keep abreast of advances in their field. Today's big contract can mean nothing when your customers look for the next upgrade, unless you position yourself as a technology partner they can grow with. That means continuing to reach them, even after they've signed the order. They'll be interested in product enhancements before they finish installing the original order.

### It's easier to keep abreast of the competition.

High-tech firms are invariably competitive, and the rules of the game can change overnight. Your customers will be well aware of the strides your competitors are making, and there generally are not very many of them. You should take advantage of these opportunities when you develop your own marketing communications program.

*By David Eisenstadt, APR, Fellow PRSA, is a partner at The Communications Group Inc. in Toronto. He can be reached at tcg@inforamp.net*

Column

# Are You Fully Servicing Your SOHO Customers?

*by Daren Khatib*

Advances in technology have provided cost-effective solutions for people to run businesses from their home or small office environments. Helping the SOHO user effectively sustain their business is an opportunity resellers need to act upon.

To maximize this opportunity, resellers need to stay educated on technological advancements and understand how to incorporate them into the SOHO user's business solution. The distribution channel, in turn, must provide services and education to meet these reseller needs.

## What Really Is SOHO?

In simple terms, the SOHO market consists of small independent businesses with less than 25 employees. Some are stand-alone with little or low MIS resource, and some are branch offices which have larger support resources.

Let's focus on SOHO customers who don't have access to a corporate information systems group to look after their operational needs. These SOHO users are looking for a "solution-in-a-box" which can provide sharing of resources including phone, fax, printer, CD-ROM and Internet access. These types of solutions provide the basic services that an average small office or home office would require.

However, for certain SOHO users, the basic services are not enough to expand their business. They therefore need the expertise and education of the resellers to help them grow.

## The Competitive Drive

To remain competitive, SOHO users must provide the same level of market presence as their large corporate counterparts. One way in which they can accomplish this is by taking advantage of electronic commerce tools through the Internet. These tools will provide more information in reaching either a broader audience, or targeting a specific group of people more efficiently. Used in conjunction with a Web site, these tools can also give your customers the same global appearance as their larger counterparts. Several companies have developed new applications to allow SOHO users to create Web pages and database linkage through simple cut, paste and fill-in the blank forms.

Uses of new and faster technology and its complementing applications have driven the need for additional bandwidth, security and flexibility. These changes have taken place both in the enterprise networks, as well as the SOHO user environment. Today's requirements demand that the networks provide the user with interactive network-attached information access. Also, the increased use of multimedia within applications means that some users can no longer connect through a mere 28.8Kbps modem.

## Networking Realities

There are several vendors that have picked up the slack in this area, including telecom providers, or most recently the cable television providers. How can SOHO users possibly keep up with these technical requirements when they are more focused on running their business?

This is the opportunity for the reseller. Resellers must possess a greater understanding of the wide area communication network, which includes anything from the setup of basic hardware to the vertical market application. Although the SOHO term can imply the use of a small LAN, the fact is that the connected SOHO workstation is a node on the Internet — the mother of all networks. Emerging technologies like X2, ISDN, ADSL, cable modems, and remote wireless satellites have developed to meet these needs. Resellers need to respond to these changes with the ability to provide consulting services in order to customize the SOHO user's environment.

## The Distributor's Role

Distribution needs to provide the reseller community with the additional marketing and technology services to benefit from this growing market. Distributors need to facilitate the reseller's ability to design, implement and market solutions, via education programs. CW

*Daren Khatib is director of technology sales for Tech Data Canada Inc. Tech Data offers a SOHO summit, and a series of cross-country seminars.*

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# Building A Web Site For Business

welcome ▶ computers ▶ motherboards ▶ modems ▶ monitors ▶ etc.

*By Sean Carruthers*

Whether you're finally getting your business on the 'Net, revamping your Web site, or helping a customer build an on-line presence — You want to make a splash. Right?

Should you get out those way-cool backgrounds you've been saving up? Or fire up those up the nifty features in your Web site-building programs? Animated gifs? Frames? Java? Shockwave? You want it all — this should be the coolest site on the Web. Right?

Actually, a better aim would be to have the most *understandable* site on the Web. Too often, in the rush to put in the bells and whistles, site-builders make their pages frustrating to navigate, sometimes nearly incomprehensible, and painstakingly slow. Stress the substance of your site, as opposed to the style.

First, figure out what you want to appear on the site. Should it serve as a basic on-line information source, and instruct customers on how to contact you for more information? Will there be an on-line list of the items you carry? Will you offer newsletters and other 'fun' things to bring people to the page?

The information you plan to provide is the basic foundation of the page. But how you present that information is crucial. Two key errors to avoid are trying to put everything onto the first page [of all places, Netscape (*http://home.netscape.com*) used to be very bad for this], and burying information so far down a chain of links that it becomes nearly impossible to find. Note: Microsoft (*http://www.microsoft.com*) is still a culprit, in its download section, making visits jump through a seemingly endless line of unnecessary hoops before reaching the links to the download sites.

Organize the pages so nearly everything is within three or four clicks of the main page, without cramming so much information in any one area that it becomes unwieldy.

Simplicity of navigation is truly important. If the site is easy to get around and intuitive, it is easier for customers to find information they will need to make purchases. Otherwise, they may get so frustrated that they'll go elsewhere.

## Presentation

Now that you know what you want to appear on the site, and where, you may be tempted to jazz things up a little bit: a wild background here, a groovy text color there, and a bunch of animated pictures chugging away at the corners of the page.

Too many people, drunk on the power of being able to design their own Web sites, create monstrosities that look good if taken as modern art, but which are almost impossible to read. Backgrounds might overwhelm the text on top of them, or the text color might be clashing with the background or disappearing into it. Keep in mind, when designing your pages for aesthetics, that the color scheme may look glorious on your souped-up system with billions of colors, but when that same page is dropped down to 256 colors, it may very well become a mottled mess. And no matter what anyone says, bright green text will never look all that good on a bright red background. If you're determined to use a background, the subtler the better. The point is to get information across, and there should be as little interference from non-essential parts of the page as possible.

Frames are the latest trend. Beware: although there are some places where frames can be truly beneficial, badly done frames can mess things up in a hurry. The two most common problems are mis-sized frames (remember the Web is a dynamic medium: not everyone's screen size is the same!) and the Death Spiral (frames within frames within frames within ...). If it's possible to accomplish the same thing without the frame set-up (say, a navigation bar), and the only reason for the use of the frame is its "coolness," simplicity should prevail.

Animated gifs can be good at attracting attention to certain parts of the page, but know when to stop! If the page gets too busy, your critical data will get lost or ignored, as the potential customer is transfixed by all the whirling and blinking lights — much like a deer caught in headlights.

## Bandwidth

Keep in mind that not everyone who will be viewing the page has a computer right on the backbone of the Internet. You will quickly learn that succinctness is a virtue.

Graphics can still be used effectively on a low-bandwidth connection if kept reasonably small and compressed. Tweak the picture quality where possible (a .jpg can often be shrunk to about half of its previous size with only minimal loss in picture quality).

On a graphics-intensive page, provide an alternate label for each of the graphics, so that people with low-bandwidth connections know what's in a picture box without having to wait for all of the graphics on the page to download.

If it takes five minutes for each of your pages to completely come up on your visitor's screen, and if all of the graphics on the page have to be loaded up for things to make any sense — a lot of customers who are too frustrated to wait for the good stuff, or the information they need, may be lost.

## Start Small

Provide the essential information first, such as how to contact your business (provide both electronic means and traditional means). As you have time, add the more specific details (product reviews and interesting links, for example). Trying to plop out a complex site all at once, can quickly prove overwhelming, and parts of the site are bound to suffer.

What's important in the end, is the information you're trying to get across to your potential customer. If you can get it to them as easily as possible, you're more likely to get the sale. ☒

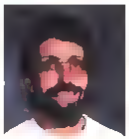
*Sean Carruthers does Web consulting for Armchair Airlines Computer Services (http://www.armchair.mb.ca) in Brandon, Man. He can be reached at oneiros@armchair.mb.ca*

Column

# Why Are We Still Waiting?!

*DVD, Universal Serial Bus, Cardbus, FireWire, Plug and Play — why are these taking so long to really catch on?*

*by Alan Zisman*



A classic 1960s soul tune by Curtis Mayfield was called "*A Change is Gonna Come*," and perhaps it should be our theme song these days.

A slew of new technologies were promised for PCs for 1997 — including DVD disks, Universal Serial Bus, and MMX processors.

Some of these technologies have actually arrived, either as a flood or a trickle. MMX processors, for example, have pretty much replaced earlier models. As predicted, EDO memory is being replaced with faster SDRAM.

But where, for example, is USB — Universal Serial Bus?

The computer I purchased last winter has pins on the motherboard to attach a USB adapter, but I haven't done that — in fact, I'm not sure where I could purchase the parts. Why bother? There aren't any readily available devices to plug into it. And yet, USB devices were seemingly everywhere at the 1996 Comdex/Fall show.

Consumers, vendors, wholesalers, and manufacturers are all stuck in a classic 'chicken-and-egg' syndrome. Vendors cite a perceived lack of consumer demand, while consumers are often unaware of promised products that aren't yet on the shelf. Of course, it doesn't always work that way. When Intel's widely-hyped MMX processors didn't make it in time for Christmas purchases last winter, many consumers chose to wait, and there was a big jump in sales of home PCs early in the new year. At the heart of the problem, however, is the lack of operating system support. When so-called Class Drivers are built into the operating system, as with printers and modems, it's simple for hardware manufacturers to provide support for new models and new technologies. When these are missing, however, each new model requires a new driver, created from the ground up.

So, even though it was announced back in 1995, wide-spread support for USB may have to wait for next year, if not longer. The higher-performance FireWire bus may take awhile before it becomes a common feature. Device makers only began to receive long-promised support code from Microsoft in April.

Let's look at the status of some of the promised new technologies.

Plug and Play was promised in 1994 by Intel. It is now supported by most motherboards and BIOSs, and by Windows 95, but not in the current version of NT. For too many users too much of the time, it remains more like 'Plug and Pray.' New specifications being promoted by Microsoft and Intel as PC98 will encourage manufacturers to drop support for the 1984-era ISA bus. Until that happens, and device manufacturers fully support it, reliable Plug and Play will remain more vision than reality.

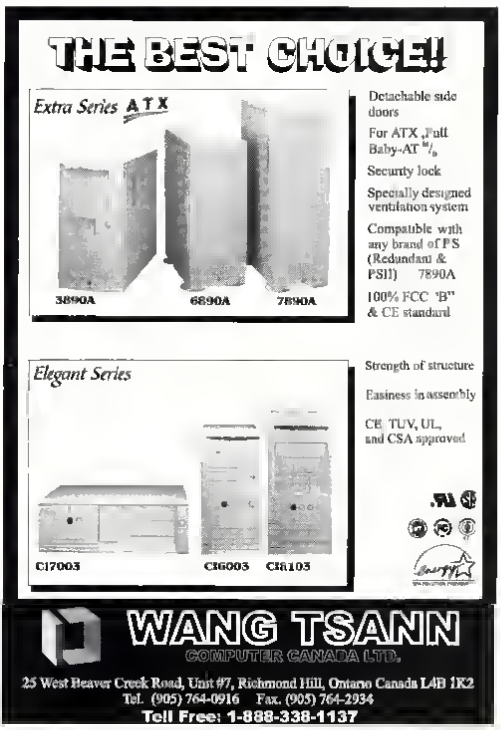
USB, as we've seen, may have to wait until it is fully supported by Microsoft in its next generation of operating systems, NT 5.0 and the next version of Windows 95, currently code-named Memphis.

FireWire has been slowed down by a desire to push the lower-cost USB, and by the lack of even preliminary code from Microsoft. Apple has announced support in future Macs.

Cardbus has been promised as a high-end replacement for PC-Cards for notebooks. It too has been slow to catch on, though it's available on a few high-end models. In part, it's been delayed because there hasn't been much perceived need. Its big advantage has been to provide support for Fast Ethernet networking, which is not yet a mass-market item. As well, it's been hampered by a lack of general operating system support, as was the original PC-Card specification, prior to Windows 95.

Until the next generation of operating system releases offers full support for the crop of hardware advances promised back in 1995 and 1996, there will be only minimal support from device manufacturers or computer makers. As Curtis Mayfield wrote, these things are "*a long time coming. But I know, a change is gonna come.*" Next month, the continuing saga of faster CPUs.

*Alan Zisman is a computer journalist and teacher living in Vancouver. He can be reached at a_zisman@cyberstore.ca*

# Evolutionary Theory: The Return Of The Threes And Fives

*by Graeme Bennett*

There's an old saying that good things come in threes. Let's expand on that maxim and say that the third and fifth versions of nearly any product will prove to be the best.

There's plenty of evidence that this is true.

For one thing, really bad products usually don't make it to a third revision, so in a sort of market-driven evolution, only the strong survive. And it's widely held among consumers — especially computer hardware and software users — that version 1.0 of anything is full of holes and unfulfilled promises — the original Apple Newton, for example, or Windows 1.0. Of course, the Web era has ushered in the increasingly commonplace concept of "public beta" releases that theoretically take the place of the 1.0 releases of yesteryear, but even "beta" is now a term forsaken by marketing mavens who prefer to term their incomplete and not-ready-for-prime-time products as "Platform Previews" or Preview Releases." At any rate, 1.0 versions get bought by the pioneers who apparently like those arrows in their backs, inadequate support and all the other glitches that come as part of the package. Sooner or later, the second version follows, addressing the truly grievous problems of the initial release and adding "must-have" features. If all goes well, the reviewers (notorious optimists that we are) give it the thumbs up and the mass market starts to take notice.

Now we have a product with legs, and it crawls out of the ooze. By the time it gets to Version 3, it has usually evolved into a versatile but not yet unduly bloated — nor truly sophisticated — product.

Those products that do make it past the third version, unfortunately, often succumb to featuritis — if the past is any indication.

Look at the evidence.

Who used MS-DOS 1.0? Version 2.11 through 3.3 were the versions that most "early adopters" got used to, and it was Version 5 that really represented a mature product. Version 4 of MS-DOS represented a classic misstep: laggardly performance and feature bloat. Version 5, for the most part, set things right.

CorelDraw is another good example. Version 3 was the first really good one. It remained on the market for many years (even after Version 4 and Version 5 were available).

Version 4 was, in most users' estimation, an overly large box of problems and Version 5 represented a highly usable version that, even today, many shops stick with as their choice (we happen to like CorelDraw 7, though). The fact that each version of CorelDraw usually takes about five "fixes" to get to a reasonably reliable state is an ancillary issue we won't explore here.

Windows, of course, is the classic example. Version 3 (3.1 in particular) was the first time it all clicked, and Version 5 — which, by our counting is Windows 95 OSR2 — is another solid release. Like many products that make it past their fifth generation, Microsoft's challenge is to add value to the sixth and subsequent versions of its products that make them a compelling buy. As we saw with DOS, after you've bundled a bunch of extras with Version 6.x, there isn't much left to do.

It is not too much of a gamble to predict that Windows NT will follow this mega-pattern, as version 3.x — the first version to gain wide acceptance — finally reaches what we think will be its first true fruition with Version 5.0 — plus service pack whatever.

Arguably, WordPerfect 5.1 was that company's definitive "sophisticated" product — especially if you count profitability and market-share. Microsoft Word version 6.0 for the Mac was a classic example of a 6.0 release that failed to capture the imagination and dollars of users as the previous 5.1 release had done.

Now with WordPerfect 8.0, Word 97, and all the other "post-Web" word processors on the market, perhaps we'll have to come up with a theory for eights and nines.

It is amusing — even when it doesn't always work — to think of the ways that other technologies evolve in this way. Storage devices, printers, modems, Web browsers, CPUs (where, amazingly, you can start with almost any model and see that it technologically peters out after three, and is discontinued or reconstructed after six revisions) — even the careers of famous people often pan out this way.

> *"Arguably, WordPerfect 5.1 was that company's definitive "sophisticated" product — especially if you count profitability and market-share."*

Look, for example, at the musical careers and breakups of the *Beatles*, *The Who*, or just about any artist who self-destructed. The third period is one of artistic maturation, followed by a dark period of difficulty, followed by a triumphant masterwork — and then, more often than not, the system collapses.

In cases like these, it is best to generalize the third, fourth and fifth periods as "golden age," "dark ages" and "glory days" and so on. Using this conceptual framework, we can map the pattern to everything from Artisoft or Apple Computer to western civilization in general. While you are wise to be skeptical of any system that seeks to simplify that which is massively complex, if we take the broad view — such mega-patterns do exist.

*Graeme Bennett is Managing Editor at The Computer Paper and is a former computer reseller. Based in Vancouver, he can be reached at graeme@tcp.ca.*

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## Interlink Electronics offers touch input

Two ergonomically designed input devices have been announced by Interlink Electronics. The VersaPoint Wireless Keyboard and the VersaPad are designed to make the operation of computers easier, more convenient and healthier by making the tasks of entering text, choosing menu items and moving a cursor more natural.

The VersaPoint Wireless Keyboard is an 81-key keyboard with an integrated touchpad. The keyboard is ideal for effortless Internet browsing, flexible text entry and business presentation control. It uses four AA batteries with an average battery life of one year.

The VersaPad offers an upward evolution from earlier touch sensitive surfaces, as it enables "precise cursor control via a fingertip or stylus, one-touch pan and scroll capability, a customizable toolbar, and on-the-fly signature and graphics capture."

The VersaPad requires only five to 10 grams of pressure, to allow effortless cursor control, either from a bare or gloved hand or a stylus.

For more information on the products, contact http://www.interlinkelec.com or call (805) 484-8855.

## Chili!Soft targets servers

On June 2, Chili!Soft, a Pennsylvania-based server software developer, introduced Chili!ASP (Active Server Pages) for Web servers. Chili!Soft claims that Chili!ASP is the only software that can run Active Server applications on non-Microsoft Web servers.

Microsoft had pioneered the Active Server Pages technology to facilitate intranet application development, and Chili!Soft has now made ASP technology available to other Web server software platforms. Software developers can use common development tools such as VB Script and J-Script to build reliable intranet applications. The new Chili!ASP could be an important tool for making software applications readily accessible over the Web.

According to Charles Crystle, CEO of Chili!Soft, "Developers can literally copy their existing ASP apps over to Chili!ASP and then run the application."

For more information, check out http://www.versicom.com/chilisoft or phone (847) 291-1616.

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## Dolch Computer announces mobile products

June 2 saw the launch of products from Dolch Computer Systems, such as PAC MediaMaster, a portable PC based on the Intel 266MHz MMX Pentium II, the S3 Virge GX PCI video controller and the Creative Labs Vibra 16X audio engine. The PAC MediaMaster is the latest implementation of Dolch's PAC (Portable Add-In Computer) technology, a cleverly designed and robust "chassis-in-chassis" architecture that allows Dolch computers to survive very hostile environments "from the battlefield to the boardroom." The PAC MediaMaster can be configured with up to 512MB of EDO RAM, up to 9GB of SCSI hard drive and a 16X CD-ROM drive. The MediaMaster is a "luggable" computer, not a notebook, but in exchange for its heavy weight, it offers six PCI/ISA internal expansion slots.

Visit http://www.dolch.com or telephone (510) 661-2220.

## Imation launches the Tape-it software

Imation Canada Inc., a subsidiary of the 3M spin-off Imation Corp., has launched Tape-it Software for use with its Travan minicartridge drives, which offer backup and restore under Windows 3.1 and Windows 95.

According to the company, by assigning a drive letter to tape devices on a user's Windows system, the software allows users to create a back up by dragging and dropping files. Tape It lets users store and access data on tape cartridges, as they would on floppy or hard drives.

For more information, visit http://www.imation.com or call 1-888-466-3456. CCW

## Novell's Marengi resigns

Novell Inc has announced the resignation of Joseph Marengi, president and chief operating officer.

Marengi served as president since September 1996, while the company conducted a search for a new chairman and chief executive officer, says Novell. He had joined Novell in 1989, and has held such responsibilities as executive vice-president worldwide sales, and channel management and sales executive positions.

Novell recently announced it is "realigning its business model to bring it in line with the realities of the market-place." The company says its current strategy is to become the leading Internet/intranet software provider.

Eric Schmidt, Novell chairman and chief executive officer, will temporarily assume the responsibilities of president.

## Sue Miller is new president at Compaq Canada

Sue Miller

Compaq Canada Inc has announced Sue Miller as the company's new president and managing director. She is well-known in the Canadian computer industry as the former president of Merisel Canada Inc.

In her new role, Miller is responsible for the overall operational activities of Compaq in Canada, including sales, marketing, systems engineering, field support, distribution, finance, administration, customer satisfaction and quality.

She has more than 15 years of management experience in the computer industry, including positions as president and managing director, Merisel Europe, and senior vice-president, Merisel Inc, president, Tallgrass Technologies Canada Inc, and general manager and controller, Digitrol Computers Inc.

Now reporting to Miller are: Judy Bigelow, manager, human resources; John Boyle, director, marketing; Ron Hulse, director, channel sales and development; Gary Reid, director, customer services and training; Claudio Silvestri, manager, information management; John Sinclair, director, operations; Pat Waid, director, national sales; and Debbie Young, director, finance.

## Epson appoints sales director

Willowdale, Ont.-based Epson Canada Ltd. has appointed Jim Mandala as director, sales marketing. He joined Epson Canada eight years ago, and has helped to develop and implement both OEM and branded sales strategies for Canada, says the company.

Mandala was most recently national sales manager. In his new role, is responsible for directing Epson Canada's overall sales and marketing programs.

Paul Girard

## Seanix president wins award

Seanix Technology Inc.'s president and founder Paul Girard, recently won the *Financial Post*'s **40 Under 40 Award**, given to 40 outstanding Canadians under 40 years of age who "have achieved excellence in the field of arts, business or community service."

Seanix claims 1996 annual sales of just under $100 million. The firm's main factory in Richmond, B.C. has a monthly production capacity of more than 10,000 PCs and 50,000 board-level products.

## Targus appoints manager of OEM accounts

Targus Canada Ltd., of Mississauga, Ont., has appointed John Steward to the position of OEM account manager. He is creating new lines of customized carrying cases for notebook computers, digital cameras, portable printers, handheld PCs and overhead projectors.

Steward has had a career focused on carrying cases and the luggage industry. In his new role he will expand Targus Canada's current OEM business and develop new opportunities, says the company.

## Borland appoints executives

Borland International Inc. has appointed Kathleen Fisher, as chief financial officer. She brings more than 15 years of experience to the position, including stints as the former financial executive of AST Research Inc. and Western Digital Corp.

Fisher succeeds Paul W. Emery, who has left the company.

Borland has also appointed Richard LeFaivre, to chief technology officer.

LeFaivre has more than 20 years experience in technology research and management at companies such as Viacom Inc., Silicon Graphics Inc., Sun Microsystems Inc., Tektronix Inc., and most recently, Apple Computer Inc., where he was vice-president of Apple's Advanced Technology Group.

## CALENDAR

**July 9-11** — **Comdex/Canada '97**
Toronto
http://www.comdex.com

**July 21-25** — **Object World West**
San Francisco
http://www.ow.com

**July 21-25** — **Internet World '97**
Chicago
Call: 1-800-632-5537
Fax: (203) 226-6976
http://www.iworld.com

**July 27-Aug.1** — **Project Software Development Inc. International User Week**
Boston
http://www.psdi.com

**Sept. 9-10** — **Softworld 97**
Vancouver
Cost: $995
E-mail: info@softworld.org
http://www.softworld.org/

**Oct. 27-30** — **Documation Canada**
Toronto
Cost: $975 (workshops extra)
E-mail: ofoussard@interdoc.ca
http://interdoc.ca/

*Do you have an upcoming event you'd like to see listed in CCW's Calendar?*
*E-mail: ccw@tcp.ca*

Column

# Computex Spotlights Taiwan's Industry Influence

*by Douglas Alder*

I recently traveled to Taipei, Taiwan — certainly one of the more influential shows for the computer dealer channel.

Though it lacks significant quantities of major resources, the tiny island of Taiwan (which is smaller than Vancouver Island), located about 100 km off the coast of the People's Republic of China, holds 21.5 million people, and is one of the world's largest manufacturers of computer products. The country leads the world in motherboard production, and produces a third of the world's notebooks. Significant proportions of the world's supply of cases, power supplies, keyboards, scanners and countless other computer products come from Taiwan.

The show is held every year at the beginning of June, which also corresponds with the summer monsoon season. It rained most days that I was there. Crank the heat up to 30 degrees Celsius and the humidity to high and you have a pretty good idea of what it is like in Taiwan.

## Innovalue

The marketing people for Taiwan have coined the term innovalue to describe the island's approach to creating products for the world markets. It is a combination of innovation and value. Another word combo they should consider is cloneverging — a combination of cloning and diverging. Many Taiwanese companies will take an existing product and rapidly come up with a high-quality, lower cost alternative with some new wrinkles to the product.

I saw numerous examples of this. The Paperport scanner. Pilot handheld computers, motherboards and Wacom tablets were all up for this kind of treatment.

The show had very little software on display. Out of more than 600 booths, there were as few as 28 focusing on software. One vendor suggested that because software piracy is so rampant in many countries along the Pacific Rim, that Taiwan businesses do not trust putting their efforts into a medium that is so easily pilfered.

The Computex show is very much a show from Taiwan manufacturers to the world. Most of the vendors are from Taiwan, though some Japanese, American and European companies show up to try and build support for their technologies with the hugely dominant Taiwanese motherboard manufacturers.

## Major Trends

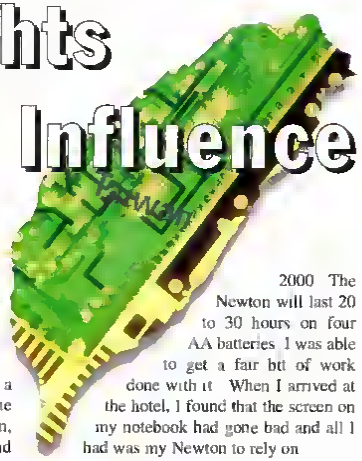
The show was good, though lacking in somewhat lacking in truly innovative products. Taiwan's strength has been to focus on specific product categories, build expertise and then dominate the market. I saw endless variants of scanners, motherboards, notebooks, tiny monitors, Web TV devices and keyboards.

## Canadians Abroad

One Canadian I did run into was Doug Stapleton, formerly of Samsung. He has started up his own company to act as agent for Jean monitors. Jean is, according to Stapleton, one of the largest producers of monitors in Taiwan. They do a lot of OEM work and have so far avoided the temptation of building a brand name. Stapleton says the company is setting up with a silk-screener in Canada so that smaller orders (300 to 500 type volumes) can be processed right in Canada.

## Newton Saves The Week

My Newton saved my butt on this trip. The trip from Vancouver to Taiwan is a 10 to 11-hour trip. My notebook usually gives up the ghost about half way through the Toronto-Vancouver flight, so I did not expect it to make it all the way across the Pacific. With that in mind, I brought along my Newton.



2000. The Newton will last 20 to 30 hours on four AA batteries. I was able to get a fair bit of work done with it. When I arrived at the hotel, I found that the screen on my notebook had gone bad and all I had was my Newton to rely on.

## International Dial-Up Service

I recently signed up for the IBM Net. It has one of the most comprehensive log-in networks on a worldwide basis. I checked and they seem to have offer dial-up numbers in more countries than CompuServe or any of the smaller ISP startups. One good thing about IBM Net seems to be that the company doesn't promote it very well, and as a result the lines are not always busy. In fact, I only had one busy signal in about 20 dial-ups.

If you are planning extensive overseas trips, IBM Net is definitely worth a look.

(Warning: accessing any Internet sites with the extension .tw may be a little slow, because the pipes to Taiwan are currently not big. The country is making an effort to upgrade them, but their telephone company runs a monopoly so it may take a while.)

## What's In A Name?

Taiwan has some big companies, but their names don't jump off your lips like major Japanese or Korean companies. Tatung, Mitac, Acer, Umax and First International Computer are some of the biggest. There are a number of Taiwanese technology companies that make up for their size deficit by choosing very unique names.

Some of the most interesting ones I saw at the show included: Strong Man Enterprises, Song Cheer, Groovy Peripherals, Act Attractive Computer, Well Run Hardwares, and best of all, Handsome Strange International. CCW

*Douglas Alder is Publisher of Canadian Computer Wholesaler. He can be reached at publisher@tcp.ca.*

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